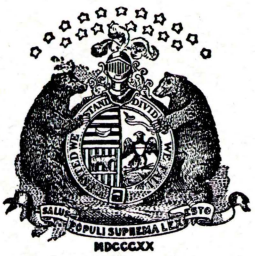
MISSOURI
STATE BOARD OF HEALTH



QUARTERLY BULLETIN

NEW SERIES

VOL. 3 APRIL-SEPTEMBER, 1913 NOS. 2 AND 3

MEMBERS OF THE BOARD

CONTENTS.

Published at Jefferson City. **Entered as second-class matter.**

BULLETIN OF THE

Missouri State Board of Health

NEW SERIES

VOL. 3 APRIL—SEPTEMBER, 1913 NOS. 2 AND 3

TRIAL CASES BEFORE THE BOARD.

The Board of Health should not take the initiative in trial cases that are expected to come before it for consideration.

The Board is a tribunal which sits and weighs impartially all the evidence which is voluntarily brought before it bearing on both sides of the case, and renders its decision as appears just and right after all the evidence has been carefully weighed. Therefore it is just to everyone concerned that the Board collect no evidence or take an active part in bringing doctors before its own body for trial for revocation of license further than the law requires.

It should hear complaints and, when made, the Secretary should take the initiative in the further work of collecting and placing all the evidence in a concise and tangible form before the Board.

Always remember the Board must have an informant; some one to prefer charges; some one who is willing to stand and testify to the things complained of. Of course, this sometimes takes a good deal of courage, but frankness always wins. So many make complaint of misconduct of others and then make the request that they be not known in the case, but that some other person, whom they mention, "will give you all the information necessary in this case. Be sure and write to him. He will furnish you abundant evidence for revocation of license, but it would not do to have my name known in the case, as this party has some friends who are friends of mine, and I therefore do not want to be known in the case." It is absolutely necessary for the complainant to make out his case plainly and stand by it. Such complaints as are worthy

will always be heard, but no one can be condemned until heard in his own defense.

The evidence must be such for revocation of license as the civil courts require, as the decision of the Board can always be appealed from and taken to the circuit court for final decision. We therefore insist that no one make complaint of any kind to the Board against any person, doctor, or thing unless he is willing to back up the complaint by furnishing proper information to justify a trial.

Whoever makes complaint shall be looked to for the evidence, and we cannot take seriously the words of one who shirks responsibility or cites some one to take up the case for him, leaving himself as as innocent spectator and good friend to all parties.

The Board will gladly hear all complaints which belong to this department when such complaints are backed up with evidence of things stated in charges.

The State Board of Health has only advisory jurisdiction over the water supply and sewage throughout the State. It cannot suppress nuisances. Special provision is made in the criminal code of the statutes of Missouri whereby these matters can all be adjusted.

WATER ANALYSIS.

Dr. Geo. H. Jones, the State Bacteriologist, will make analysis for bacteria of all water sent to him from any point in the State; and we hope to be prepared, ere long, to make chemical analysis also.

Persons sending in water for analysis should thoroughly sterilize a pint bottle, fill it with the water to be analyzed, put it in a bucket and pack ice around it, then express immediately to Dr. Geo. H. Jones, State Bacteriologist, Jefferson City, Mo. Express charges must be prepaid.

There will be no charge for the analysis of the water.

MEETINGS OF THE BOARD.

The annual meeting of the Board will be held in Jefferson City, Mo., January 1, 1914.

There will be a meeting for examinations held in St. Louis, Mo., Jefferson Hotel, February 9-10-11, 1914. The chair appointed a committee to conduct the examinations, consisting of

Drs. Upshaw, Adcock and Schulz. Midwives will be examined on the morning of the 11th. Examinations will begin promptly at 9:00 a. m. each day.

On the 12th of February the entire Board will meet to transact important business.

SCHOOL SANITATION.

A few years ago nearly if not all of the county medical societies of the State made a strenuous endeavor to hold joint public health meetings with teachers' institutes. Some of the more aggressive societies succeeded in holding one, some two meetings—nothing has been heard of them since. The county superintendents gave half-hearted support in a few instances, but in the majority of cases no support was given. The public school teachers were as a rule wholly indifferent to the benefits that might have resulted from the scientific study and discussion of school sanitation and school hygiene, and the old-time condition of improperly ventilated and poorly heated and lighted school buildings remains. The average district school building in this State is not a credit to the intelligent citizenship of the commonwealth.

"The best index to community health is the physical welfare of school children," and it may be said that the careless methods of constructing and locating school buildings and the indifferent manner in which wells and privies are placed on public school grounds and cared for, is a sad commentary on the intelligence of boards of education and the patrons of our schools, as well as an evidence of their indifference to the health of the school children of the State.

It is a well-known fact that the average teacher in our public schools gives scant attention to the study and teaching of hygiene. Whether this subject is less interesting than others is not known. Some teachers claim that it is neglected because of an overcharged curriculum; that they are required to teach more subjects than the time allowed permits. If the latter is true, in the name of common justice to our children let us change the curriculum and give this, the most important study, the right of way; if the former be true, that it is a less interesting study, something should be done by our textbook commissions to remedy it by selecting such textbooks on hygiene as may be taught and studied with greater interest. While the lack of proper instruction in hygiene in the public schools may be overcome by instruction children receive in their

homes, yet nothing that parent or guardian can do at home lessens the danger to the health of the child that is brought about by a source of infection present in or about school buildings and premises. How seldom are school buildings fumigated, even during epidemics of contagious diseases in the community. How frequently do we find a cistern or well so near the privy that contamination of the water is almost certain, or so close to the door of the building that expectoration frequently finds its way into the well. The common drinking cup should be abolished from the schoolroom, for the mouths and noses of children who may have recovered from a number of childhood diseases still harbor the germs, and the drinking cup and towel too often aid in spreading the malady. The eyes of scores of children are permanently damaged by improper lighting of school buildings.

Many a school building in the country is located on a tract of land donated by some generous farmer who does not consider the location with reference to its healthfuness, but rather because it does not mar the beauty of his farm nor deprive him of a fertile acre.

When will the people wake up to the fact that the protection and promotion of the health of the child in our public schools is paramount, and that the very future of our country depends upon the healthfulness of the youth of the land?

DR. F. H. M.

REPORT OF EXAMINATIONS.

The following is the list of those who took the examination in St. Louis June 16, 17 and 18, and successfully passed the examination:

Altringer, Arthur N.
Abramopoulos, Christos A.
Anderson, Bert
Allen, Charles Harry
Abernathy, Wade H.
Biggs, James Brown
Berghoff, Robert Sixtus
Buntin, Grover Cleveland
Burger, Floyd Ansler
Boughnon, Harve Peter
Bruce, Whittington Hubert
Boonshaft, Louis
Benes, Gordan Edward
Bell, Dolphus Harrison
Brownfield, William Henry
Beatty, James Henry
Bussard, Clifford Frank
Capelle, Charles Stanislaus
Clark, Morris Holdon
Carr, Claud William
Divine, Duke Girdner
Dugay, Harry William
Etherton, Monte Charles
Enloe, Lawrence David
Elstein, Mordechai A.
Foster, Forest Field
Floreth, Otto Philip
Fleming, Thomas Simpson
Ficklin, Frank Baker
Fruth, Virgil Jaye
Focht, Ralph Herbert
Fry, Chas. Sumner

Ferguson, John D.
Greer, Mark
Gibbs, Fred LeGrande
Gungle, Edward Joseph
Garst, Virgil Paul
Goodall, Oswald Patrick
Gunby, Kathryn Elizabeth
Hennerich, Joseph Paul, Jr.
Hedrick, Harold Bert
Hockaday, James A., Jr.
Halsted, Frederick Smith
Hourn, George Edwin
Higgins, James Ralph
Hammer, John Elmer
Horst, Walter William
Hanson, William Ludwig
Helle, Augusta
Hurt, James Eldridge
Haley, Michael Robert
Insley, Herbert Wellington
Jacobi, Franklin Enoch
Koppenbrink, Walter Edwin
Kopelwitz, Jonas Clarence
Keown, Charles
Kilian, Leo Julius
Koon, Guy Alton
Kell, Fred
Kettlekamp, Frederick Oscar
Koenig, Otto Martin
Knabb, Arthur Dalphie
Larimore, Joseph William
Liersch, Joseph Clemens
Laffoon, France Leslie
Leisure, Elmer Allen
Laws, Clarence Jackson
Lewis, Walter Scott
McCarty, Hiram George
McCarthy, Harvey Edward
McNearney, Joseph
McWilliams, Charles Allen
McFadden, James Frederick
McKelvey, Samuel Wheeler
Mills, Joseph Walter
Miller, Harry Fancourt
Moore, George Gail
Morton, Warren R.
Meador, Harvey Lafayette
Meier, Peter
Maguire, Michael Joseph
Moore, Neil Sewell
Manning, Joseph Crockett
Miller, Charles Henry
Neinstedt, Elam J.
Orr, Charles Augustus
Ohrt, John Paul
O'Brien, Stephen Leo
Payne, Richard Johnson
Ploehn, Emma
Porter, Russel Crosby
Peck, Joseph H
Post, Lawrence Tyler
Palmer, Charles Edward
Perrings, Fred Selby
Powell, Carl Arthur
Porter, William
Rothman, Henry Leo
Rutherford, Orra L.
Reinhardt, John Herman
Rodenheiser, Edwin William
Rotter, Julius Charles
Rybolt, Stephen Ballard
Ryan, William Don
Russell, Myron Meredith
Reinhardt, Robert August
Sevin, Omar Richard
Schwarz, Otto Henry
Sattler, Georgia B.
Snedec, Joseph Francis
Stadtherr, Anthony L.
Souder, Lewis E.
Snyder, Edward Nicholas
Seale, Guy Milburn
Schulz, Arthur Paul Erich
Stadtherr, Edward F.
Smith, Clarence Vernon
Smith, Merrill Neville
Slocumb, Leith Hollinshead
Sante, LeRoy
Spangler, Harve Bayard
Smith, Ira Irving
Schafer, Joseph Charles
Turgeon, Leo Victor
Turner, Herbert Harriss
Thompson, Preston
Underwood, Ross Holland
Vandivert, William Worthington
Vonachen, John Rudolph
Vera, Miguel
Watkins, George Lancaster
Williams, James Ernest
Winemiller, Lee Hanville
Williams, James Rector
Wilson, Jesse D.
Wagenbach, Wm. F.

Wright, Daniel Paul
Woeger, Jacob G.
Wilson, Grover
Will, Waldo Harrison
Walker, John Milton
Zugg, Clark William
Hamil, Albert H.
Gebhardt, Albert A.

The following-named midwives were successful in passing this examination:

Boekhoff, Mrs. Marie
Grubesic, Kristina
Ottopal, Mrs. Hedwig
Ramming, Mrs. Ida C.
Walters, Mary Gertrude

The following is a list of those who took the examination in Kansas City, Mo., September 2, 3 and 4, 1913, and successfully passed the examination:

Adcock, Delbert Claude
Carr, Caroline
Connell, Even Shelby
Coombs, Miller O.
Dripps, Roy C.
Fairchild, A. W.
Fowler, J. Henry
Hallberg, J. W.
Howell, W. L.
Hurt, Lee.
Knight, Wm. A.
Lynch, E. I.
Metz, C. W.
Miller, Oliver J.
Moon, Virgil H.
Nieweg, Geo. Alfred
Pollack, Max.
Postlethwaite, Frank McClung
Potter, Caryl
Sampson, B. F.
Simrell, Harry Alex.
Smith, Don LaMotte
Wagner, Werner H.
Walsh, Wm. T.
White, Edwin C.
Williams, Lee Roy
Wilson, Cliff Cicero

Mrs. Bertha Keim passed the midwife examination.

The following is the list of those registered in Missouri who have been endorsed for reciprocity with other states since May 1, 1913:

Barricelli, Louis E.....Illinois
Blackburn, Porter Douglas.....Texas
Bolding, E. R.....Kansas
Busch, O. Roy.....Texas
Cave, R. R.....Kansas
Crutcher, John B.....Kansas
Douglas, Edward Turner.....Illinois
Douglas, John H.....Georgia
Everett, A. E.....Wisconsin
Ferrell, J. J.....Texas
Hagler, M. C.....Texas

Henske, Joseph A.....Illinois
Hibbard, Sherman B.....Kansas
Howland, John .....Indiana
House, Ramond G.....Kansas
Huffman, David M.....Texas
Johnson, C. A.....Indiana
Johnson, S. A.....West Virginia
Kaplan, M. I.....Illinois
Koch, John V.....Ohio
Kunz, Frank O.....Illinois
Lehman, E. H.....Kansas
Marcy, F. A.....District of Columbia
McGinnis, Clive Sidney.....Texas
Schwarz, Edward F.....Ohio
Shedd, H. B.....Indiana
Shomber, Henry .....Kansas
Slaughter, Theron Hart.....Illinois
Stine, Ira Allen.....Illinois
Walters, H. F.....Wisconsin
Woodward, H. S.....Kansas
Hertel, G. E.....Minnesota

The following is the list of those who have received licenses, to practice medicine and surgery, from the Missouri State Board of Health, through reciprocity with other states since May 1, 1913:

Barnes, Francis M., Jr.....Indiana
Borden, T. C.....Kansas
Brooks, Barney .....Indiana
Condon, C. M.....Iowa
Enz, Helena Eleanor.....Kansas
Faust, J. Wesley.....Kansas
Fledderman, Henry .....Illinois
Frein, Harry J.....Illinois
Harmon, L. D.....Nebraska
Hittner, H. M.....Kansas
Huffman, James W.....Indiana
Hughes, T. W.....Georgia
Hughes, Nathan A.....Georgia
Laws, Clement Edwin.....Nevada
Lillard, Archie H.....Georgia
Logan, James Alexander.....Illinois

Mercer, Ray ..... Illinois
Morley, Fred Henry ..... Kansas
Murphy, W. W ..... Illinois
Polk, D. T ..... Kansas
Rambo, C. C ..... Colorado
Ratliff, Harry L ..... Kansas
Reutter, Garfield Arthur ..... Nebraska
Rhoades, F. H ..... Kansas
Roberts, Samuel E ..... Kansas
Sherlock, P. ..... Iowa
Way, Franklin E ..... Kansas
West, Walter Ernest ..... Iowa
Young, Louise S ..... Illinois

COUNTY HEALTH OFFICERS.

The following list of county health officers is given that this department may correct the list where changes have been made. We ask that notice be given immediately in case of any change in local health officer:

Adair	Dr. L. J. Conner	Kirksville.
Andrew	Dr. W. H. Bailey	Savannah.
Atchison	Dr. E. A. Lewis	Rocheport.
Audrain	Dr. Robert C. Storde	Mexico.
Barry	Dr. D. L. Mitchell	Cassville.
Barton	Dr. A. B. Stone	Lamar.
Bates	Dr. T. C. Boulware	Butler.
Benton	Dr. W. G. Jones	Lincoln.
Bollinger	Dr. C. M. Witmer	Marble Hill.
Boone	Dr. J. E. Thornton	Columbia.
Buchanan	Dr. J. K. Graham	St. Joseph.
Butler	Dr. A. Windsor	Poplar Bluff.
Caldwell	Dr. James E. Gartside	Kingston.
Callaway	Dr. Green D. McColl	Fulton.
Camden	Dr. J. S. Ford	Linn Creek.
Cape Girardeau	Dr. G. W. Vinyard	Jackson.
Carroll	Dr. C. S. Austin	Carrollton.
Carter	Dr. T. W. Cotton	Van Buren.
Cass	Dr. H. G. May	Harrisonville.
Cedar	Dr. E. S. Smith	Stockton.
Chariton	Dr. G. W. Hawkins	Salisbury.
Christian	Dr. W. B. Wasson	Nixa.
Clark	Dr. W. H. Martin	Kahoka.
Clay	Dr. Wm. H. Goodson	Liberty.
Clinton	Dr. C. H. Risley	Cameron.
Cole	Dr. O. E. Amos	Jefferson City.
Cooper	Dr. R. L. Evans	Boonville.
Crawford	Dr. John H. Martyn	Cuba.
Dade	Dr. W. M. Hall	Lockwood.
Dallas	Dr. Irvin Phillips	Buffalo.
Daviess	Dr. L. R. Doolin	Gallatin.
DeKalb	Dr. W. J. Clark	Maysville.
Dent	Dr. W. E. Rudd	Salem.
Douglas	Dr. J. L. Gentry	Ava.
Dunklin	Dr. A. S. Harrison	Kennett.
Franklin	Dr. O. N. Schudde	Sullivan.
Gasconade	Dr. W. C. Wessel	Hermann.

Gentry	Dr. Geo. W. Smith	Albany.
Greene	Dr. R. C. Robertson	Brookline.
Grundy	Dr. Samuel Sheldon	Trenton.
Harrison	Dr. E. H. Bryson	Bethany.
Henry	Dr. W. H. Gibbins	Clinton.
Hickory	Dr. H. C. Brookshire	Hermitage.
Holt	Dr. C. L. Evans	Oregon.
Howard	Dr. Jas. H. Champion	Rocheport.
Howell	Dr. D. J. Nichols	West Plains.
Iron	Dr. G. W. Farrar	Ironton.
Jackson	Dr. J. W. Green	Independence.
Jasper	Dr. K. E. Baker	Carthage.
Jefferson	Dr. Oliver E. Hensley	Pevely.
Johnson	Dr. John Powers	Warrensburg.
Knox	Dr. T. A. Campbell	Edina.
Laclede	Dr. J. M. Billings	Lebanon.
Lafayette	Dr. F. W. Mann	Wellington.
Lawrence	Dr. S. N. Townsend	Aurora.
Lewis	Dr. Z. T. Knight	Monticello.
Lincoln	Dr. E. A. Hicks	Troy.
Linn	Dr. R. H. Morris	Linneus.
Livingston	Dr. David Gordon	Chillicothe.
McDonald	Dr. O. St. John	Pineville.
Macon	Dr. W. H. Miller	Macon.
Madison	Dr. Chas. U. Davis	Fredericktown.
Maries	Dr. J. E. Jose	Vienna.
Marion	Dr. A. R. Stone	Palmyra.
Mercer	Dr. G. M. Bristow	Princeton.
Mississippi	Dr. John C. Boone	Charleston.
Moniteau	Dr. J. P. Burke, Jr	California.
Monroe	Dr. F. M. Moss	Paris.
Montgomery	Dr. Ira A. Miller	Middleton.
Morgan	Dr. H. N. Lutman	Versailles.
New Madrid	Dr. P. M. Mayfield	Portageville.
Newton	Dr. R. C. Lamson	Neosho.
Nodaway	Dr. Chas. E. Bell	Maryville.
Oregon	Dr. J. L. Eblen	Alton.
Osage	Dr. James Jett	Linn.
Ozark	Dr. John T. White	Gainesville.
Pemiscot	.....	.....
Perry	Dr. T. M. Hudson	Perryville.
Pettis	Dr. C. B. Trader	Sedalia.
Phelps	Dr. C. H. Fulbright	St. James.
Pike	Dr. M. O. Biggs	Bowling Green.
Platte	Dr. R. P. C. Wilson	Platte City.
Polk	Dr. W. D. Drake	Bolivar.
Pulaski	Dr. L. Tice	Waynesville.
Putnam	Dr. Lee Haynes	Mendota.
Ralls	Dr. J. T. Downing	New London.
Randolph	Dr. S. P. Towles	Moberly.
Ray	Dr. J. E. Ball	Richmond.
Reynolds	Dr. T. H. Shy	Centerville.
Ripley	Dr. S. A. Proctor	Doniphan.
Saline	Dr. G. S. Hardin	Marshall.
Schuyler	Dr. W. A. Potter	Lancaster.
Scotland	Dr. W. S. Petty	Rutledge.
Scott	Dr. Uriel P. Haw	Benton.
Shannon	Dr. P. D. Gum	Birch Tree.
Shelby	Dr. H. C. Vaughn	Shelbina.
St. Charles	Dr. Carl Bitter	St. Charles.
St. Clair	Dr. C. A. Smith	Osceola.
St. Francois	Dr. Ben R. Downing	Farmington.
St. Genevieve	Dr. F. E. Hinch	St. Genevieve.
St. Louis	Dr. H. H. Hanson	Webster Groves.
Stoddard	Dr. Eldon Phillips	Bloomfield.
Stone	Dr. L. Henson	Galena.
Sullivan	Dr. A. R. Poole	Milan.

Taney	Dr. Guy B. Mitchell	Branson.
Texas	Dr. J. R. Womack	Houston.
Vernon	Dr. G. W. Petty	Nevada.
Warren	Dr. John H. Dyer	Warrenton.
Washington	Dr. S. F. Thurman	Potosi.
Wayne	Dr. J. E. Wagner	Greenville.
Webster	Dr. W. R. Beattie	Marshfield.
Worth	Dr. J. R. Phipps	Grant City.
Wright	Dr. B. E. Latimer	Hartville.

DIPHTHERIA ANTITOXIN DISTRIBUTED UNDER THE DIRECTION OF THE MISSOURI STATE BOARD OF HEALTH.

Recognizing the value of diphtheria antitoxin as a prophylactic and curative agent, it is the desire of the Missouri State Board of Health that the antitoxin shall be readily available to the indigent and poor people of the State at all times.

To secure for each of these local boards of health and county courts the advantage of the best quality and prices, we have consummated an arrangement with the H. K. Mulford Company, Philadelphia, Pa., for the distribution of their product. The Mulford diphtheria antitoxin is a purified and concentrated product prepared in accordance with the most improved methods. Every dose is supplied in a perfected aseptic glass syringe ready for immediate use.

The antitoxin will be available at the following special prices to the local boards of health and county courts:

1000 units	$ .50
3000 units	1.35
5000 units	2.00
7500 units	3.00
10000 units	4.00

The distribution will be handled through the druggists. No special distributing stations will be appointed, and the regular "concentrated and purified" grade of the Mulford antitoxin will be furnished.

Instructions for Obtaining Antitoxin.

Blank requisition forms will be furnished to all druggists at this time, and additional supplies may be obtained by application to the office of the State Board of Health, or to H. K. Mulford Company, Philadelphia.

These forms have spaces for inserting the name of the patient, physician and local health officer, or other authorized official. When thus filled in and signed, the requisition becomes valid and the druggist is thereby authorized to furnish from his regular stock such quantities of antitoxin as may be specified thereon.

Upon this signed requisition being sent by the druggist to H. K. Mulford Company, Philadelphia, an adjustment is made with the druggist accordingly, and the antitoxin is charged to the account of the local board of health or county court, as may be indicated on the order.

Usefulness of Antitoxin.

At this late day it is hardly necessary to offer any arguments in favor of the use of antitoxin in the treatment of diphtheria. Since it was first generally used in 1894 the mortality from diphtheria has dropped from 44 per cent to 12 per cent. If administered the first day of the disease it practically saves every life. It has greatly reduced the duration of the disease in the cases that recover, and thereby the period of quarantine, during which the public is more or less in danger.

Of still greater use probably is the employment of antitoxin in small doses (1000 units) to prevent the development of diphtheria in those necessarily exposed to it.

We strongly urge the more general use of antitoxin for the prevention of this disease as a wise public health measure. When, as frequently happens, diphtheria occurs in some poor family living in close quarters, so that isolation of the sick one is impossible, the best thing to do is to at once inject each member of the household with 1000 units of antitoxin. This will give them almost complete protection from the disease for several weeks.

Dosage.

It should be remembered that the success of antitoxin in the treatment of diphtheria depends largely upon its early use, in sufficiently large doses. We suggest the following:

Immunizing dose.—1000 to 2000 units.

Curative dose.—In light cases, not involving the larynx, if treatment is given on the first day of disease, 3000 units will generally be found to be sufficient. If treatment is not given until the second or third day of the disease, it would be better to give 5000

units. If disease is severe, and in all cases of diphtheritic laryngitis, at least 7500 or 10,000 units ars safer doses to use. If favorable results do not follow within six to eight hours, the initial dose should be repeated or doubled.

In all cases it is safer to give large doses than to risk the danger of an insufficient dosage.

Physicians are frequently called to cases of diphtheria in poor families where the use of antitoxin would mean the saving of life, but where the family is too poor to purchase it. In such case the local boards of health or county court and physicians are urged to take advantage of the arrangement described above and thus help the patient and at the same time assist the State Board of Health in reducing the mortality rate of diphtheria in the State of Missouri.

MISSOURI STATE BOARD OF HEALTH.
J. A. B. ADCOCK, Secretary.

ODE TO T. P. RIXEY.

I.

Colonel Rixey, in the chapel,
I heard you this morning say
That your duties here were ending,
And that soon you'd go away.
"Go away!" I asked the question,
He who came, with gladsome cheer,
Is to go, and we 'mid sorrow,
Never more his voice shall hear?

II.

"True!" a something seemed to tell me
He must go, the time's at hand;
He, who loved not foolish passions,
But loved much his fellowman;
He, who loved the walk of reason,
Saw in life's great winding way
Hope eternal, shining ever
From creation's endless day.

III.

He must go! he, that so often
Came unto us in the night,
Holding high his light of reason,
Shedding on us all its light;
He, who gazed upon the stone walls,
Saw the vines which to them clung;
Heard among them strains of music
Which some warbling songster sung.

IV.

He who said those vines which cling there,
Fought for life like men must fight;
Which on stone walls, prison stone walls,
Clung and crept to God's sunlight;
As they crept some little creature,
God destined to live and sing,
Sat among them, pouring music
Freely out to everything.

V.

He must go, his work is ended;
Where? But oh! I hate to ask;
On his way performing duties,
Finishing his own life's task.
By the roadside he will linger,
With an outstretched open hand,
Ever waiting, ever ready
To prove he's a friend to man.

VI.

Thou, who guides the world through mystery,
Bless him for the good he's done;
Let him live to guide the footsteps
Of his precious little son
Up the path which leads to manhood,
And behold him as a man;
Wise and noble helping mankind
With a brother's willing hand.

VII.

And, oh! when the end of trials
Come unto him, lift his soul
From this place of strife and struggle;
From this earth so void and cold;
Lift him up, his great big spirit
Is too big; it cannot die;
Lift it up to life eternal,
Father! hear my humble cry.

VIII.

And, in memory of his goodness,
Let the wanderers stop and read:
"He sleeps here, that knew no failure,
But helped failure to succeed.
His was love, he knew no stranger,
On the road to take his stand,
And he died as he had lived here,
With an outstretched hand to man."

March 12, 1911. By C. J. D.

The above verses were written by one confined in the State prison at Jefferson City, who had learned to love and appreciate the kind spirit of Col. T. P. Rixey, who had been acting chaplain for a season, and had gained the confidence and esteem of all the inmates.

The lines are full of good sentiment and pathos.

J. A. B. A.

THE CONTROL OF DISEASE.

(By Edward H. Lewinski-Corwin, Ph. D. In Collaboration with Earl W. Mayo.)
(Written for the Outlook.)

There are certain diseases which it would easily be possible for medical skill, clothed with sufficient authority, to banish utterly from any community within a brief time. If we were to set up in each city or state a competent medical dictator, with authority to enforce regulations and restrictions that past discoveries have suggested, he could quickly put an end to typhoid fever and malaria, and reduce diphtheria and scarlet fever to a point where they would cause as little concern as does smallpox in most of our cities at the present time.

Within the past few years we have seen something of this very sort accomplished at Panama, which has been transformed, under the sanitary rule of Colonel Gorgas, from a spot in which it was deemed impossible for white men to work or to live for any length of time, to a district which compares favorably in its health record with any other portion of the United States.

While it is true that under what may be designated as ideal conditions of medical control, it would be possible to reduce and in some directions practically to eliminate mortality and morbidity from the common forms of contagious and communicable disease, it is equally true that these diseases continue to exact their toll of sickness and death in all parts of the country at a rate that is still relatively large. If we turn to the statistics of three familiar contagious diseases, diphtheria, scarlet fever and measles, we find that in 1910 there were 71,238 cases of these diseases in New York and 25,038 in Chicago. There are many smaller cities that would show far higher rates proportionately to their populations.

Not Wholly a Medical Problem.

This is but another way of saying that the control and eradication of disease is not wholly a medical problem. It is almost equally a social problem. So long as the general public prefers to submit to the suffering and loss imposed by controllable diseases, medical skill cannot lift the burden. But the medical profession can devise means of extending the degree of control exercised over contagious and communicable disease. It can impress

upon the public mind the advantage and the necessity of isolating and limiting such diseases so far as is possible under existing conditions. And this is a public service which is being performed with increasing thoroughness and effect by medical men through their various organizations.

The problem of dealing with contagious diseases is not a simple one. This is true especially in large and crowded cities. The majority of cases of measles, diphtheria and scarlet fever, for example, occur among children. Even in schools where medical inspection is provided these diseases often go unrecognized in the early stages and until the opportunity to prevent the spread of contagion has passed. Ignorance and indifference frequently vitiate attempts at effective home quarantine. There are still parents who cling to the senseless belief that measles and scarlet fever are inevitable ills and that the sooner their children have had them and are through with them the better.

Cycles of Contagion.

Contagious diseases, at least the commoner ones, which are here dealt with, come and go in waves or cycles, recurring more or less regularly. Measles and scarlet fever appear usually at the same time of year and run in parallel waves. A high wave of measles is accompanied by a high wave of scarlet fever. The receding tides are likewise simultaneous and parallel, although the amplitude of the measles wave is usually much larger than that of scarlet fever. Diphtheria fluctuates less from year to year than the other two. It has a longer season, beginning usually in August or September and slackening only in May or June. It never becomes so suddenly acute as measles and scarlet fever, but its greatest prevalence falls during the months of their heavy incidence.

This synchronous occurrence of the high and low points in the prevalence of the commoner contagious diseases adds to the difficulty of effective control. On account of the difficulties attending the enforcement of rigid home quarantine, it is recognized that hospital treatment is the best method of checking the spread of infection. The maintenance of hospital facilities for diseases that may supply hundreds of cases in March and only tens in July presents some special problems. If hospital equipment is provided to care for the number of cases presented when an epidemic is at its

height, most of its beds will stand empty during a good part of the year. This in itself is no great calamity, but, whether patients are many or few, the cost of maintenance, the overhead charges, the expense of the medical and nursing staff, must go on. The demands upon the exchequer of the average city are such that public officials are not likely to agree to the expenditure of funds for hospitals unless they are reasonably well filled at most times. There are many unusual items of expense connected with the maintenance of hospitals for contagious diseases, including the necessity of separate pavilions and separate working staffs for each disease treated.

Inadequate Hospital Facilities.

The practical working out of these conditions in most cities is that the provision of hospitals for the treatment of contagious diseases is altogether inadequate. When an epidemic develops, the hospitals are overcrowded, sometimes to the bursting point. Such congestion operates to defeat their usefulness. Overcrowding and lack of air space lead to cross-infection. Insufficient medical and nursing attendance work havoc among the patients. The mortality rates become much higher than the corresponding rates among patients treated in their homes. The lack of ample and modern provision for contagious disease hospitals in many American cities has led to the strong prejudice that exists against these "pest-houses," as they are popularly and sometimes accurately named.

In a previous article reference has been made to the work done by the New York Academy of Medicine in helping to solve some of the public health problems of the city. One of the first subjects to which the public health, hospital and budget committee of the academy turned its attention upon its organization early in 1911 was a study of the contagious disease situation in New York. It was found that there were too few hospitals for the needs of the city, and that their capacity was sorely overtaxed during epidemics. The long ambulance rides in conveying patients to the hospitals, amounting in some instances to eighteen miles, were exhausting and in some cases fatal. As a result of its investigations, the committee made a large number of recommendations covering the erection of new hospitals, besides details of construction and administration, quarantine and sanitary regulations, nursing, medical care, and after care.

One of the peculiar difficulties attending the handling of contagious diseases was illustrated when the city authorities, following out the suggestions of the committee, provided for the erection of new contagious disease hospitals in two boroughs of the city where such facilities were greatly needed. Owners of property adjoining the sites selected immediately protested on the ground that property values would be depreciated because of the popular prejudice against living in the neighborhood of such institutions. The committee thereupon issued an address pointing out that a hospital for diphtheria, measles, and scarlet fever when properly administered is not a danger to a neighborhood. Undoubtedly, however, a much more sustained effort at popular education in this matter is necessary to eradicate the mediæval notion that the contagion of these diseases is somehow carried about in the air and that the vicinity of a hospital devoted to them necessarily must be a dangerous locality.

Problem of the Black Plague.

While the danger from failure to control such diseases as have been mentioned is generally appreciated, and failure to adopt adequate measures of protection is due usually to practical financial difficulties, there are other more dangerous and insidious diseases against which society has remained virtually unprotected because of ignorance regarding them and because of false notions of modesty which have stood in the way of attempts to dispel this ignorance. Unquestionably it is primarily because of the efforts of physicians to find some means of checking the frightful ravages of this class of diseases that the public is gradually awakening to the importance of this subject and is being brought to the determination to put an end to damaged goods in the eugenic sense of the term.

There is plenty of evidence to prove that it is high time to grapple with this problem, and that its solution will require public support and co-operation in enforcing such measures as may be suggested by the experience of the medical profession. The most serious fact about these diseases, which poison the blood, destroy mental faculties, and bring a vast train of physical and social ills in their wake, is that their worst effects fall upon the innocent. The hospitals for children are full of venereal affections; half of the existing blindness is due to them; their victims fill not only

hospitals and dispensaries, but also lunatic asylums and correctional and charitable institutions.

Over thirteen per cent of all cases admitted to the New York state insane asylums in 1911 were cases of general paresis, an incurable disease of the brain due to syphilis. The care of these patients alone costs the state a million dollars a year. In the city of Philadelphia the cases of paresis, tabes, and cerebro-spinal syphilis admitted to the neurological wards form fifteen per cent of the admissions. From twenty to thirty per cent of the patients in our general hospitals suffer from one form or another of these diseases.

In January, 1913, a circular letter was sent by the department of health of New York to every physician in the city, asking him to give the number of cases of venereal disease that he had treated during 1912. The 1,500 physicians who replied, out of a total of 8,000, reported a total number of cases amounting to 42,659. This, of course, is only a fraction of the number of cases treated in private practice. To form an estimate of the extent of this form of disease one would have to add the large numbers treated in hospitals and dispensaries, and there would still be left a very large number of cases that receive no treatment at all or that receive it at the hands of druggists or of quacks.

Public Co-operation Necessary.

The causes of these diseases are well known, as are also the methods of early diagnosis and the remedies that can be applied effectively in their earlier stages. Upon the medical side, society is well equipped to resist the spread of this frightful scourge. But it is true of these diseases to a greater extent than of almost any others that medical skill alone is unable to deal effectively with the situation. The physician cannot compel treatment, nor can he prevent the spread of the contagion. Ony education and rigid social discipline, combined with adequate therapeutic and prophylactic measures, can check the spread of these ravaging diseases. The public and the medical profession must work together in order to check and finally to conquer them.

In an effort to devise more effective methods of dealing with diseases of this class the public health, hospital and budget committee of the New York Academy of Medicine has turned its attention to an important agency which is valuable also in dealing

with many other forms of disease, but which is usually hampered by lack of resources and facilities. This is the dispensary or out-patient clinic. With an equal expenditure of time and effort the well-equipped dispensary can deal with a far greater number of those cases which it is fitted to treat than can a hospital, and it reaches many cases that never would come under hospital care. According to official statistics more than 3,500,000 treatments were given in the dispensaries of the city of New York in 1911. This of course is the count of treatments, not of patients. Many patients come many times. Even with this qualification, however, the figures are instructive as showing the vast tide of illness and misery that flows unceasingly upon the one hundred odd dispensaries of the city, the amount of gratuitous service that the attending physicians render, and the important place that the dispensary occupies in the general scheme of public health work.

Importance of the Dispensary.

In view of the vast field that it is called upon to cover and the importance of its work, it is a curious fact that the dispensary is looked upon almost invariably by boards of managers as the Cinderella of the hospital household. It is scarcely ever cared for properly, is seldom well equipped, and is almost always expected to be self-supporting. Apparently not much faith is placed in the efficacy of the medical treatment provided by the dispensary, and slight recognition is given to its great possibilities in preventive medicine and in the public health movement. It is relatively easy to raise money for a hospital, but it is difficult to raise it for a dispensary, despite the greater social importance of the out-patient department. The hospital deals with cases of disease when they are in full swing; the dispensary deals with them in incipient stages, when they lend themselves much more readily to successful treatment and cure. Then, also, the dispensary has a great function to perform in advising and guiding patients with chronic diseases who either cannot be admitted to hospitals, or, if admitted, are likely to become pauperized, hospitalized and helpless. Dispensary work becomes still more efficient and socialized where it reaches out to the homes of patients through a social service department, which brings patients back for treatment and thereby prevents the waste of the physicians' efforts, which supplies facts helpful to establishing correct diagnoses, and does educational

work looking to the conservation of health and the prevention of disease among the dispensary's constituency. Wherever dispensary work is treated conscientiously along such lines as these, its benefits soon become manifest. From this brief outline of the field of the dispensary it may readily be seen that it is especially adapted to dealing with those diseases which menace society particularly because, either from ignorance or fear of exposure on the part of their victims, they do not receive private medical treatment or come under hospital care until they have reached advanced stages, having been transmitted possibly to many other persons in the interim. In any comprehensive plan for dealing with diseases of this class the dispensary should fill a very important role.

In the effort to increase the efficiency of this branch of the public health service the public health, hospital and budget committee of the academy was instrumental in bringing about the formation of the associated out-patient clinics of New York, with the fourfold aim of co-ordinating the work of the existing dispensaries and out-patient clinics; of eliminating "rounders" and other undeserving applicants; of promoting proper standards of treatment, and of securing economy and efficiency in management. Most of the important general dispensaries of Manhattan, all of those connected with teaching institutions, the municipal dispensaries, and many special dispensaries, have joined the association. In the short period of its existence many important measures have been adopted and changes have been inaugurated which will go a long way toward the betterment of existing conditions. The association should prove valuable in helping to impress upon medical authorities, city officials, and the general public the importance of this branch of public health endeavor.

A Public Health Clearing House.

Another field in which the academy's committee has been active has been in bringing about a concentration of effort among agencies devoted to the promotion of public health. The committee found that there were in New York City over one hundred civic, charitable, scientific, social, and religious agencies interested in one way or another in the matter of public health. In order to save effort and to enhance efficiency a plan was put forward to establish a clearing house of public health activities to include these organizations.

This proposal led to the formation in June, 1913, of a central

council of public health of the city of New York. The purpose of this organization is to deal with those problems requiring civic and public effort for their proper solution.

One of the many subjects which may come within the scope of the council is the provision of adequate facilities for the care of mental defectives. It has been officially estimated that the number of persons in the state of New York having the taint of mental defect is 200,000, and that there are about 20,000 of the lower grades of mentality, of whom a little over 6,000 are in public and private institutions. With the exception of this small proportion, these mentally deficient individuals are under no restraint and are free to breed a further race of idiots, imbeciles, criminals, prostitutes and epileptics. In New York City these unfortunates, or such of them as are capable of being taught, receive a certain degree of care and attention between the ages of six or seven and fourteen in the ungraded classes of the public schools established for abnormally backward children. In 1911 the city maintained one hundred and twenty-six such classes, with an enrollment of something over one thousand.

Outside of this provision of school care, which of course is entirely inadequate to deal with the problem of the mentally defective, only the scantiest provision has been made thus far for dealing with this problem. In 1912 the New York state institutions for the feeble-minded and the epileptic, of whom 98 per cent are estimated to be mentally defective, had a total capacity of 4,155 beds, and their census at the time showed that there were 4,208 inmates. In addition the city of New York maintains at Randall's Island provision for a few hundred of this class of unfortunates. Not only is there a startling lack of physical provision for the care of mental defectives, as shown by the above figures, but there is a lack of adequate laws for dealing with this problem and of a well-defined social policy in relation to it.

Control for Mental Defectives.

To supply this threefold need the public health, hospital and budget committee of the New York Academy of Medicine has outlined a plan for dealing with this matter. This plan provides for placing the entire charge of the mental defectives throughout the state in the hands of a board of control. Under its supervision the care of feeble-minded children might be left with the parents during their earlier years. During school age means should be pro-

vided for teaching as many as possible of them to be self-supporting. Those who attained this position might be allowed later to live outside of institutions, but at all times they should remain under the supervision of the board of control in order to make possible their social control and the prevention of propagation. A bureau for the collection of permanent records of all mental defectives in the state, from birth to death, is proposed as one feature of the plan which looks to the careful control of the great army of mental defectives and the gradual reduction of the burden of dependency arising from this cause.

Health Service at Ports.

One subject which has an important bearing upon the prevention of the spread of disease in these days when commerce between nations has reached such vast proportions is the proper provision of health inspection and quarantine for communicable diseases at the various ports of the country. While the methods of preventing disease from entering the country through its ports are sufficiently well developed as far as technical knowledge is concerned, the possibility of a failure in efficiency through the existence of divided authority is great enough to make the subject one of public concern. This aspect of the case recently has received the attention of the public health, hospital and budget committee of the academy of medicine, which has made the recommendation that the health supervision of the port of New York should be transferred to the United States public health service. Because of political considerations action in this direction, however, seems likely to wait until a strong and forceful expression of public opinion demands it.

The Public Health Service.

Since 1893 all maritime and interstate quarantine powers of the United States have vested in what is now known as the public health service, which is a branch of the treasury department, and is directed by a supervising surgeon-general. The public health service is empowered to promulgate uniform quarantine regulations for all ports of the United States, and these regulations must be enforced by state and municipal authorities if they retain the administration of port affairs. At the present time the public health service operates forty-eight stations on the Atlantic, Gulf and Pacific coasts, besides the quarantine systems of Hawaii,

Porto Rico, the Phillippines and Alaska. The growth of its control over the various ports was gradual. As cities and states found that their individual efforts to keep out or to stamp out disease were ineffective or too costly, they became ready to transfer the regulation of this matter to the Federal Government of their own accord. Only three ports are not yet under direct federal control—those of Boston, Baltimore and New York.

Of all the ports of the country New York is the one which would seem most certainly to belong under federal authority. By far the greater part of the ocean-borne trade and travel of the country passes through this gateway. The magnitude of its commerce and its importance as an immigration center makes its port business pre-eminently national in character. Yet the financial burden of maintaining at this port the health safeguards which help to protect the whole country rests upon the state of New York alone. The budgetary requests for improvements and administration of the service for 1913 amounted to $2,314,780.

Reasons for National Control.

While the cost of maintaining the New York quarantine service should be an inducement to the state to surrender it to federal authority, there were numerous other reasons that impelled the academy of medicine's committee to recommend the transfer. Aside from the fact that the service is one that is essentially national, or perhaps it might better be described as international, in its relations and in its bearing upon the public health, there is likely under present conditions to arise a conflict of authority that might seriously endanger the public health under critical conditions. Only last year, at the time of plague prevalence in Cuba, friction between the two authorities developed when a liner from Havana, to which a clean bill of health was refused by the federal officers at the port of departure, was admitted to pratique by the state officers of New York on the ground that the violation of the rules on the part of the ship's captain was a matter to be attended by the Federal Government. Moreover, quarantine is the only service at the port that is not controlled by the National Government. In addition to the customs, immigration, navy and army administration, federal authority maintains the revenue cutter service and has control over navigable channels, dredging and lighthouses. It seems only consistent to extend its power to quarantine and to have all port services under the one authority.

There is another reason for the transfer pointed out by the committee. As long as quarantine remains under state control and its officers are a part of the spoils of party success, there is constant danger that politics may interfere with the efficiency of its work. The public health service of the United States is outside the domain of partisan politics. Modern quarantine work is essentially scientific, and scientific work cannot be pursued successfully except under the condition of reasonable permanency in office. The positions of chief quarantine officers should not be subject to party vicissitudes and should not be used as a reward for party services. Under federal control there is continuity of service, uniformity of policy, constant supervision of the acts of all quarantine officers, and abundant opportunities for scientific and administrative training in various ports of the world, such as is not available to the officers of any state.

Co-operation of Lay Public and Medical Profession.

While the above sketch of a few of the activities in which the medical profession, through one of its most prominent and influential organizations, is working to promote the cause of public health is necessarily far from comprehensive, and perhaps may be described as fragmentary, it serves to indicate that there is an important field of social endeavor which is not as yet occupied, or at least is only imperfectly occupied. Since the conservation of public health is not wholly a medical question, but is in many cases even more largely a social question, there is abundant need and opportunity here for effective co-operation between the lay public and the medical profession. Do we not need an active national society which shall include leaders of public thought as well as leaders of achievement in the study and prevention of disease and in the application of medical knowledge to the promotion of public health? Such an organization could do an invaluable work in removing obstacles that exist in the pathway of medical progress and public health advancement. It could help to educate the lay public to the possibility and the advantage of protecting itself by the adoption of reasonable safeguards against the spread of controllable diseases. In many ways it could give a powerful impetus to the great cause of health conservation, which is literally the most vital of all causes claiming our interest and active participation.

WHY REGISTER BIRTHS?

(Idaho State Board of Health.)

"1. That the birth, date of birth, parentage and other essential information for governmental and identification purposes may be made a matter of official record.

"2. That the ages of school children may be definitely known, making the proper enforcement of school laws possible.

"3. That prosecutions dealing with 'age of consent' may be settled by record and not by conjecture.

"4. That litigation in matters of inheritance and settlement of estates may be simplified by the definite knowledge of the ages of all persons concerned.

"5. That the American-born children of foreign-born parents may have indisputable evidence of American birth which will protect them from enforced military service when visiting the mother country of the parents.

"6. That blindness may be prevented by prompt medical attention to the infected eyes of the newborn.

"7. That infection and mortality among women may be prevented and that young babies may be saved by immediate attention by existing agencies for the relief of the poor.

"8. That the children's bureau of the United States Government may become effective and may carry out the duties imposed upon it by Congress.

"Death registration without birth registration is like an accurate accounting of expenditures without consideration of income."—Idaho State Board of Health.

WHY REGISTER DEATHS?

(E. Dana Durand, Director of the Census, Washington, D. C.)

"1. That there may be available, complete and accurate information as to deaths of all human beings, with dates of death and causes of death, to the end that preventable causes of death may be eliminated and human lives lengthened.

"2. That the various public health agencies—national, state and municipal— and the various private agencies for the prevention of disease may know the number of deaths that occur and thereby may operate intelligently.

"3. That these agencies may determine what part of our mortality is preventable and when and where preventable deaths occur.

"4. That pestilential and epidemic diseases may be detected promptly.

"5. That we may apply our remarkable scientific knowledge of disease prevention intelligently at the time and in the place where such application is most needed.

"6. That the success or failure of all measures attempted in the prevention of diseases may be accurately determined.

"7. That individual cities and localities may learn their own health condition by comparison with the conditions of other communities and determine thereby the wise course of public health activity.

"8. That homeseekers and immigrants may be guided in the selection of safe and healthful homes by accurate information rather than by misstatement of interested persons.

"9. That the settlement of estates and matters of inheritance, pensions, etc., may be definitely settled by official record of death instead of on the memory of interested witnesses.

" 'It seems to me that there is almost nothing more important in the entire field of statistics than vital statistics, because of their direct bearing upon the health and consequent welfare of the people.' "

BACTERIOLOGIST'S REPORT.

Bacteriological Laboratory.

Total examinations for six months—April to September.

	Tuberculosis (Sputum)	Typhoid	Diphtheria	Water	Gonorrhoea	Malaria	Rabies	Spinal Fluid	Tuberculosis (Not Sputum)	Miscellaneous	
April	201	42	11	14	10	10	4	2	10	20	
May	274	63	17	20	6	8	2	1	9	31	
June	218	68	14	43	9	10	2	0	5	31	
July	222	147	13	83	10	14	0	1	13	24	
August	177	172	10	19	10	8	0	0	8	8	
September	133	126	28	27	12	9	1	3	5	7	
Totals	1,225	618	93	206	57	59	9	7	50	125	
Grand total											2,449

Tuberculosis, per cent positive	46.6
Typhoid, per cent positive	45.4
Diptheria, per cent positive	89.7

The total number of examinations, 2,449, shows an increase of 604 over the total of the previous six months.

It is evident that the physicians of the State are taking advantage of the co-operation offered by this department, and in return it is urged that this means of corroborating a diagnosis be used whenever possible, both for the good of the patient and for the stimulation of interest among the members of the profession in the more obscure points of diagnosis.

Preparation of Specimens for Sending to the Laboratory.

Sputum.—Regulation sputum outfits may be obtained by addressing the State Bacteriologist, Jefferson City, Mo. Full directions accompany each outfit. Physicians are urged to use this means of sending specimens of sputum to the laboratory.

Blood.—It is impossible to examine a single specimen of blood for both typhoid and malaria. For the Widal test for typhoid, the blood is best obtained by pricking the lobe of the ear with a flat

or a three-cornered needle, or the point of a knife. The ear should first be rubbed with cotton and alcohol, then dried, and the needle should be sterile. Two or three good-sized drops should be collected on filter paper provided by the laboratory for this purpose.

For malaria the blood is obtained in the same way, but must be spread in a thin, even smear on a glass miscroscope slide. This is done as follows: A small drop of blood is received onto the slide near one end by touching the slide to the blood as it hangs from the lobe of the ear. The slide is then laid on a firm flat surface, and the end of a second slide, held at an angle of about thirty degrees with the first slide and touching it, is brought into contact with the drop of blood. In two or three seconds the blood will have run across the slide at the point of contact. Then the second slide is pushed along on the first with a moderate speed, so as to leave a thin, even smear on the surface of the first slide. A second smear may be made in a similar manner on the other slide. Caution: Have slides perfectly clean, handle only by the edges and work rapidly. Allow them to dry in the air without heat.

Blood should never be placed between slides and sent to the laboratory.

Swabs for diphtheria.—The regulation tube and mailing case, to be obtained from the county health officer or from the State Bacteriologist, should be used for this purpose. Full directions accompany each outfit.

Water.—Specimens of water are examined for their potability, chiefiy determined by the absence or presence of colon bacilli, an index to sewage pollution.

For a total bacterial count it is imperative that all samples be iced from the time of taking until they reach the laboratory. For this purpose special containers may be obtained by addressing the laboratory and paying the express charges both ways.

Pus.—Pus, to be examined for gonococci, should be sent on a slide prepared as follows: A small amount—much less than a drop—should be mixed on the slide with a small drop of water and spread over an area a half inch or more in diameter, and allowed to dry. Do not press slides together.

Rabies.—Unless the animal shows symptoms of rabies, it should not be killed, but should be held for observation, in which event death will result in a very few days, in ample time to begin treatment of patient. Do not kill the animal by a blow or shot in

the head, as this may make a proper examination impossible. The head only of the animal should be sent, and that at the earliest possible moment. The head is to be placed in a tin bucket with a tightly fitting cover, which bucket is to be placed in a larger wooden or iron bucket and surrounded by sawdust and iced. The heads of animals freshly killed may be sprinkled with salt, packed in wet sawdust in a strong wooden box, and expressed.

Urine.—Specimens of urine are examined for tubercle bacilli in suspected cases of genito-urinary tuberculosis.

In sending urine to be examined for tubercle bacilli, the following points should be carefully noted:

1. The specimen should be obtained by catheter, and drawn directly into a sterile bottle.

2. It should be stated upon the card accompanying the specimen that it was obtained by catheter.

3. Two or four ounces of urine should be sent and preservative should be used.

Feces.—Feces will be examined for tubercle bacilli, and for the ova of intestinal parasites (hookworm). Special containers for this purpose may be obtained by addressing the laboratory.

Reports of Examinations.

Reports on all examinations will be sent out at the earliest possible moment. For interpretation of the same we will adhere to the following:

Specimens should not be sent so as to arrive on Sunday or a holiday, as only those needing immediate attention, namely, those from suspected cases of diphtheria or rabies, will be examined on these days.

Sputum Examination.—The presence of tubercle baccilli is positive evidence of tuberculosis. However, absence of bacilli does not signify that the patient does not have tuberculosis, and should clinical symptoms still lead you to suspect tuberculosis, other samples should be sent.

The Widal reaction for typhoid fever is present in at least ninety-five per cent of all cases at some time during the first week, usually appearing during the second week. It may be obtained for even years after an attack, so that a previous infection must be considered. A positive Widal also follows the administration of the typhoid vaccine.

Diphtheria examinations will be given precedence at all times, and if the smear proves positive it will be reported at once, in the manner indicated upon the accompanying card. If the smear is negative, the result of the culture must be awaited. Antitoxin should be given at once in all suspicious cases, especially in children. The laboratory report may then be awaited to confirm diagnosis or to indicate a change in treatment.

The report from the laboratory will cover the following findings only:

B. Diphtheria present.

No B. Diphtheria found.

Suspicious organism.

Streptococcus (when the predominating organism).

B. Influenzae (when the predominating organism).

Spirrillum of vincent.

No growth.

Contamination (when insufficient to invalidate the diagnosis).

A positive report cancels all previous negatives on the same case. A negative report may mean any one of the following:

1. Absence of B. Diphtheria in the throat.

2. Failure to reach the bacilli with the swab. This occurs frequently in laryngeal cases and may occur in pharyngeal cases through imperfect technic. (See instructions in container.)

3. Failure to inoculate the swab properly.

4. A very few diphtheria bacilli in the presence of many other varieties may be overlooked by the bacteriologist. Statistical study shows this to be infrequent.

"Suspicious Organism" calls for a second culture. Antitoxin should be given at once and temporary isolation instituted.

All suspicious cultures will be reincubated and will be reported a second time if more definite findings are obtained.

"No growth" means nothing. Diagnosis is withheld and a second culture is required. It may be due to—

1. Use of an antiseptic in the throat previous to taking the culture.

2. Failure to inoculate the swab properly.

"Contamination" means nothing. Diagnosis is withheld and a second culture is required.

Malaria.—Presence of the plasmodium malariae is positive evidence of infection. It may be present, however, and not be

found. The commonest cause of failure to find the organism, provided the blood smear is a good one, is the administration of quinine. Therefore, the blood should be taken before the anti-malarial treatment is begun.

Rabies.—The presence of the so-called Negri bodies in the brain are diagnostic of rabies. Although present in a large majority of cases, they are not always found, and clinical symptoms of rabies in an animal, even in the absence of Negri bodies, demand that a person bitten begin at once the preventive treatment.

Water.—Colon bacilli. Absence of colon bacilli means that the water is free from sewage pollution. Presence of colon bacilli may mean one or more of several things:

1. Sewage pollution in greater or less amount.
2. Accidental introduction of the germs in taking the sample.
3. Their presence in small numbers may have no significance. The uncertainty of these positive reports is the source of a good deal of misunderstanding.

A notable source of misunderstanding is in regard to typhoid bacilli. Examination is not made for this organism for the following reasons:

1. The procedure requires a great deal of time in order to arrive at a definite conclusion.
2. Typhoid bacilli often do not live long in water, and a negative finding in such a case might lead to very serious results.
3. The test for colon bacilli, which are always present in water containing typhoid bacilli, is a comparatively simple one; therefore it is no longer a part of the routine work of public health laboratories to search for typhoid bacilli in drinking water. If colon bacilli are reported absent, the water is safe from a bacteriological standpoint. If reported present it is open to suspicion, at least, and may be decidedly unfit to drink without boiling.

All requests for examinations should be made on blanks for the purpose. Blanks for future use will be sent out with reports, thus endeavoring to keep the physicians supplied. By using this blank no necessary data will be overlooked, and a uniform card is obtained for filing. When using the diphtheria outfit the special blank accompanying it should be filled out in place of a "request card." If the specimen is pus, exudate or drinking water, state the source. There is printed information enclosed in each container.

The unusual drought of the past summer, causing an insufficient water supply in many localities, has been the cause of numerous outbreaks of typhoid fever. This condition at present we hope has been relieved; this same has been responsible for the requests for a great number of water examinations and the use of the special water containers. Owing to the great demand there has been some delay in furnishing these upon request. Now that a new supply of containers has been added to the service, it is hoped that in the future all such requests can be supplied promptly, and it is urged that these be used for the transportation of all specimens of water.

GEO. H. JONES, M. D.,
State Bacteriologist.

VITAL STATISTICS.

Summary Showing Comparison of Important Causes of Death During April, May and June, 1913.

Statistics compiled for the second quarter of 1913, April, May and June, show there was a total of 9,759 deaths, of which 5,374 were males, 4,385 females, 8,846 white, and 912 black. The month of April showed the highest number of deaths, 3,503, and June the lowest, 3,057. For the same quarter in 1912 there were 9,920 deaths, or 161 more than in 1913.

All forms of tuberculosis resulted in 1,254 deaths, or 12.7 per cent of the total for the quarter. For the same period in 1912 there were 1,396 deaths from tuberculosis, or 142 more than the present year, indicative of the effective fight being waged against the "white plague" by the State Board of Health through its Secretary, Dr. J. A. B. Adcock, and the Missouri Anti-Tuberculosis Society.

Cancer caused 515 deaths during the months of April, May and June, a decrease of 18 compared with the first quarter of the present year, and a decrease of seven compared with the second quarter of 1912.

A marked decrease is noted in deaths from epidemic meningitis during the second quarter of 1913, compared with same period for 1912, which was 240 and 54, respectively.

Other important causes of deaths were: Smallpox, 4; measles, 230; scarlet fever, 53; whooping cough, 82; diphtheria and croup, 76; diabetes, 108; nervous system, 598; heart, 1,294; pneumonia, 778; diarrhoea and enteritis, 284; nephritis and Brights disease, 681; accidents, 487; suicides, 164; homicides, 69.

There were 16,571 births reported as having occurred during April, May and June, of which 8,656 were males, 7,915 females, 16,039 whites and 532 blacks.

It will be noted from the foregoing there were 8,812 more births than deaths during the quarter, a decrease of 2,252 births compared with the first three months of 1913.

TABLE SHOWING BIRTHS FILED WITH THE CENTRAL BUREAU OF VITAL STATISTICS DURING MONTHS OF APRIL, MAY AND JUNE, 1913.
BY SEX AND COLOR, (STILLBIRTHS EXCLUDED).

Month.	Total.	Male.		Female.	
		White.	Black.	White.	Black.
April	6,073	3,061	88	2,832	92
May	5,176	2,770	88	2,227	91
June	5,322	2,569	80	2,580	93
Totals	16,571	8,400	256	7,639	276
Total by sex			8,656		7,915

TABLE SHOWING DEATHS IN THE STATE FROM TWENTY-FOUR IMPORTANT CAUSES, FILED WITH THE CENTRAL BUREAU OF VITAL STATISTICS DURING THE MONTHS OF APRIL, MAY AND JUNE, 1913, (STILLBIRTHS EXCLUDED).

Causes.	April.	May.	June.	Total.
Typhoid Fever	34	36	32	102
Smallpox	2	2		4
Measles	112	78	40	230
Scarlet Fever	19	24	10	53
Whooping Cough	27	34	21	82
Diphtheria and Croup	28	25	23	76
Influenza	59	11	13	83
Tuberculosis of the Lungs	381	375	342	1,098
Other forms of Tuberculosis	46	54	56	156
Cancer	146	185	184	515
Diabetes	40	39	29	108
Epidemic Cerebrospinal Meningitis	27	18	7	52
Acute Anterior Poliomyelitis			2	2
Other Diseases of the Nervous System	227	188	183	598
Diseases of Heart and Circulatory System	467	443	384	1,294
Pneumonia, Bronchopneumonia	404	243	131	778
Other Diseases of Respiratory System	106	60	50	216
Diarrhoea and Enteritis (under 2 years of age)	70	67	147	284
Acute Nephritis and Brights Disease	229	223	229	681
The Puerperal State	66	40	31	137
Accidents	164	149	174	487
Suicides	66	45	53	164
Homicides	24	22	23	69
Other Causes	759	838	893	2,490
Totals	3,503	3,199	3,057	9,759

Births and Deaths Reported in Missouri (Stillbirths Not Included) During the Quarter Ending June, 1913.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
																											Important causes of death.
Adair—	22,700																										
April		37	19	1		3												4	4		1	3	1				2
May		39	15					1			1	1	1	1	1		2	1				1	1	1	1	1	1
June		43	14					3			1		1					2	2			1		1			3
Totals		119	48																								
Andrew—	15,282																										
April		31	10								2						1	1	2				1				3
May		54	6															1	1	1							3
June		17	8										2					1			1	1		1	2		
Totals		102	24																								
Atchison—	13,604																										
April		28	5										1										1	1			2
May		20	4											1				2									1
June		20	7														2	1				2					2
Totals		68	16																								
Audrain—	21,687																										
April		29	24								1		1				2	5	3	2		2	1	1			6
May		33	19					3			2	1	1				3	1	1					2			5
June		22	10	1							1		1											2		2	3
Totals		84	53																								

Barry—	23,869																												
April		47	14							2	1								1	2	1		1	1				5
May		54	13				1	2			1		1					2			1			1				4
June		35	15					1			2								2			2	2					6
Totals		136	42																										
Barton—	16,747																												
April		30	11						1	1	1							1		3	2			1				1
May		23	12								2		2	1						3			2					2
June		25	7								1		1						1									4
Totals		78	30																										
Bates—	25,869																												
April		54	26				1			1	1		2	2				3	4	2	1		1		2			6
May		55	24				2	1			1		3					1	4			2	2		2			6
June		41	23	1		1	2				3			1				3	2	1			1		7			1
Totals		150	73																										
Benton—	14,881																												
April		25	12			2					1	1						2	1	2			1			1		1
May		26	10								1							1			1		3		2			2
June		21	6																3	1				1				1
Totals		72	28																										
Bollinger—	14,576																												
April		42	17							1	4		1						1	3	1		1					5
May		29	8																2					1				5
June		28	3								1									1			1					
Totals		99	28																										
Boone—	30,533																												
April		50	32	1		3				2	5		1	1				3	4	3	1		1					7
May		59	24					1			5		2					1	4	2	1							8
June		58	26								5	4						2	3	1	1						1	9
Totals		167	82																										
Buchanan (outside St. Joseph)—	15,517																												
April		24	16						1		4		1					1	2	1								6
May		18	19								1		3	1					2	1	1		5	1	1			3
June		29	14			1					1			1				3	2	1			1		5			3
Totals		71	49																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																							
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
St. Joseph—	77,403																										
April		119	91			8	1				3	2	6				9	16	8	3	1	8	3	2	1		20
May		114	68			1	1				5	2	4				6	11	4	2	1	4		5	1		21
June		94	73	1		1					3	1	4	1			4	10	2		3	9		5	1		28
Totals		327	232																								
Butler—	20,624																										
April		42	23					1		1	1	1					3	1	6				1	1			7
May		57	26					1			5						2	2	4					3	1		8
June		56	31	3							2	2						1	3		3						17
Totals		155	80																								
Caldwell—	14,605																										
April		22	20					2			2		2				2	5		2							5
May		30	12	1							2		1					3			1	1	1				2
June		20	7								1		1				2	1				1					1
Totals		72	39																								
Callaway—	24,400																										
April		57	21			1					2						2	3	1	3		2	3				4
May		41	23								9		1	1			2	3	1			3					3
June		41	25								4	1					2	4	2	1		3					8
Totals		139	69																								

Camden—	11,582																												
April		17	6								1								1	1			2					1
May		25	2																	1								1
June		13	6								1								1						1			3
Totals		55	14																									
Cape Girardeau—	27,621																												
April		56	26	2				1		2	1	1	1				2			8			3		1			4
May		42	18								1								5	4			1		2			5
June		54	24	1				4			1						1		5	1	1	1	2		2			6
Totals		152	68																									
Carroll—	23,098																												
April		31	18	1		1					4		1							2		1	1	1	2			4
May		37	20			1					2		1				1		6	2		1	2					4
June		34	9								2								2						1			4
Totals		102	47																									
Carter—	5,504																												
April		16	4								2								1									1
May		20	5								1								2				1					1
June		10	5								2																	3
Totals		46	14																									
Cass—	22,973																												
April		44	25			1	1			1	1		1				3		6	1			2	1	1			6
May		34	25				2				2						3		3	1			1	3	5			5
June		40	17								2		3						2	1							2	7
Totals		118	67																									
Cedar—	16,080																												
April		29	8											2					1	3								2
May		25	15			1				1	1						2		2	1		1	1					5
June		29	17				1			1	4	1		1					2	1		1			1			4
Totals		83	40																									
Chariton—	23,503																												
April		49	22			4				2	2		1				4		5	2								2
May		50	22	1		1					2		1	1			2		5	3			1	1	1			3
June		43	15	1									3						2					1	1			7
Totals		142	59																									

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913

Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	uses
Christian—	15,832																										
April		35	5	1							1								2					1			
May		49	15								3						2		1					2		1	6
June		25	10										1				1				1						7
Totals		109	30																								
Clark—	12,811																										
April		14	7								2							2	1								2
May		18	12								3						1	1	1			1			1		4
June		22	11											1			3	2	1	1							3
Totals		54	30																								
Clay—	20,302																										
April		33	27				2				3		2	2	1		3	3	3		2	2					4
May		37	23	2				1			2			2			1	2				8				1	4
June		26	26								3	2					1	5		1		2		4			8
Totals		96	76																								
Clinton—	15,297																										
April		24	15			2	1			2			2				1	2	2			1					2
May		21	10								2		1				1			2		1	1	1			1
June		24	7								1							4				1					1
Totals		69	32																								

Cole (outside Jefferson City)—	10,107																												
April		11	5					5			1		1					2		1	2			1					1
May		12	2																										1
June		10	8								1		1					2									1		3
Totals		33	15																										
Jefferson City—	11,850																												
April		12	26					4			3	1	1				1	1	3	1		2		1	1			7
May		17	18					1			4	1	2					2	1			3						4
June		2	21	7				1			5							1	1	2	3	2			1			5
Totals		31	65																										
Cooper—	20,311																												
April		32	24								3	1	1				3	5	4	1		2		1				3
May		23	22								3	1					3	4		2		3	1	1				4
June		25	18			1					2		2					3		1					1			8
Totals		80	64																										
Crawford—	13,576																												
April		34	10						1								1		2		1		1	2				2
May		21	7		3		1				1						1					1						
June		32	12								1						3	1			2							5
Totals		87	29																										
Dade—	15,613																												
April		34	15		2				1	1		1					1	1	2	1		1	1					3
May		17	12	1	1					1		1						2					1	1	1			3
June		33	16							1							1	3		2	1	1						7
Totals		84	43																										
Dallas—	13,181											2																	
April		11	3																										1
May		23	7								5												1					1
June		14	6						1	1							2		1									1
Totals		48	16																										
Daviess—	17,605																												
April		23	18						1	1		1					2	1	2	1		1		2				6
May		31	13	1	1					1							1		4	1		1	1					2
June		26	9	1								1					1	1					1					5
Totals		80	40																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																										
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
DeKalb—	12,531																													
April		22	3								1											1		1					
May		21	1															1											
June		31	9										2					1						1					5
Totals		74	13																											
Dent—	13,245																													
April		18	9			1			1		2		1				1	2	1											
May		25	9															2	1		1								5
June		25	4																					1					3
Totals		68	22																											
Douglas—	16,604																													
April		42	6														1		1										4
May		33	8								2						1	1		1				1					2
June		27	9							1							1		2		1								4
Totals		102	23																											
Dunklin—	30,328																													
April		107	44			3					2						7	3	8	1	2		2							16
May		82	41			2	1				1						2		3		4	2	1	2						23
June		78	42	2		4					1	1	1				1		1	2	8									21
Totals		267	127																											

Franklin—	29,830																											
April		59	31					1		3	3							1	5		3				2	2		11
May		62	34				1	1		1	4		1					5	3	2	1		2		1	2		10
June		36	26	1							1		3	2				2	3	1	2	1	1	1	1			7
Totals		157	91																									
Gasconade—	12,847																											
April		29	13			1				1								2	3				3			1		2
May		25	6			2												1										3
June		26	9			1		1			1	1						1					1					3
Totals		80	28																									
Gentry—	16,820																											
April		37	8										3					1	1				1	1				1
May		28	16	3		1							1	1				2	3	1			1					3
June		19	22						2			2						3	2							1	1	11
Totals		84	46																									
Greene (outside of Springfield)—	28,630																											
April		51	28	1				2		2	2	1						2	1	7	1		1			1	1	6
May		47	24			3					1		2						8	1			1		1			7
June		41	16	1							1		2							1	1	1		1	2	1		5
Totals		39	68																									
Springfield—	35,201																											
April		61	41			1					4		1					5	4	6	2	1	4	2	3	1		7
May		99	42							1	4	2	1		2			4	4	2	1		1		3	2		15
June		52	48	3		1			1		3	1	5					3	4	4		2	1	1	3			16
Totals		212	131																									
Grundy—	16,744																											
April		33	15	2							2		1					2		2		1	2	1				2
May		29	14					1			2								1	3								7
June		27	12								4	2							1						1			4
Totals		89	41																									
Harrison—	20,466																											
April		31	22							1	3		1	1				2	3	1			2		1			7
May		52	13										2	2	1				1	2			1					4
June		37	17								3		1					2	2	1		1	1		1			5
Totals		120	52																									

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death. Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 yrs. of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Henry—	27,242																										
April		45	24			2					2						3	4	4	2	1	1	1				3
May		36	11								2	1						3				2					3
June		32	27	1						1	3	1	1				2	6				2			1		8
Totals		113	62																								
Hickory—	8,741																										
April		19	8							1							1	1	2								3
May		7	4																			1	1				2
June		9	5								1			1							1			1			1
Totals		35	17																								
Holt—	14,539																										
April		24	7							6			1				1										3
May		26	6																					1			5
June		27	9								2		1						1			3					2
Totals		77	22																								
Howard—	15,653																										
April		25	20	1		1					2		3				1	4	2	1		1					4
May		16	15	1		1					2	1					2		1	1	1	1					4
June		10	11			1			1		2						2							2			3
Totals		51	46																								

Howell—	21,065																													
April		63	17					1			5				2		1		1					3			5
May		43	17	2				1			2						3		1					1			7
June		52	12								2							3	1		1	2		2			1
Totals		158	46																											
Iron—	8,563																													
April		18	9					1			3								2				1	1			1
May		34	8						2		1		1										1				3
June		13	9								1	1		1			2	1									3
Totals		65	26																											
Jackson (outside of Kansas City)—	35,141																													
April		42	28							1	2		2	3			5	1	2			5					7
May		47	26			2					3						3	5	1		2	1		1			8
June		59	22			2					2	1					1	3						4	1		8
Totals		148	76																											
Kansas City—	248,381																													
April		426	372	2		23	1	3	1	1	34	4	10	7	4		14	62	27	4	19	22	10	32	15	9	68
May		381	332	4	1	17	2	4	3	1	32	4	25	2	5		10	67	21	4	8	21	3	15	9	6	68
June		390	295	3		4			4		30	4	18	2	3		10	48	12	4	16	19	2	16	11	8	81
Totals		1,197	999																											
Jasper (outside Joplin and Webb City)—	45,783																													
April		75	68	2	1	2	1	1		1	7	3	1	1	3		7	4	10	1	1	1	4				17
May		79	38	1		2		1			4	1	1		1		4	3	2		2	1		5			10
June		63	39			2	3	1			6		1				4	3	1	1	3	4	2	2	1		5
Totals		217	145																											
Joplin—	32,073																													
April		59	38		1						7		4	1	2		1	3	1		1	2	1	1			13
May		42	34	5				1			6		1				1	5	1		1	5		1		1	6
June		75	38								5		3				2	3	2		6	1	3	2	1	1	9
Totals		176	110																											
Webb City—	11,817																													
April		40	22								6				1		1	4	2				2	2			4
May		27	23			3					4	1	1				2	3	2	1				1			5
June		27	17	1		2	1				1	1	1				2						1	2			5
Totals		84	62																											

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																				
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Jefferson—	27,878																									
April		63	16	1							1	1					2	1	2			1	1				6
May		37	18					1			2	1						2	3		1	2					6
June		47	17														2	5					3	2			5
Totals		147	51																								
Johnson—	26,297																									
April		49	25			1		2			2		1				1	4	6			1		1	2	1	3
May		33	24								4		2				1	2	3	3				1			8
June		29	17	2			1	1			2		1				2	2									6
Totals		111	66																								
Knox—	12,403																									
April		9	4														1	1	1			1					
May		14	8								1		2					2	1								2
June		35	9								2							1	1					1			4
Totals		58	21																								
Laclede—	17,363																									
April		31	10	1							1							3					1				4
May		35	10								1						1	3									5
June		33	18								1		2				1	2	1			1		1	1		8
Totals		99	38																								

Lafayette—	30,154																														
April		53	32					1			3	1	2	1			4	1	8	1		2		1			7
May		62	25								2	1	1	1			3	6	2		1	1		1			6
June		62	34	1				1			3	1	2				4	5	1					1			15
Totals		177	91																												
Lawrence—	26,583																														
April		52	26			1		1			2		1	1			1	4	4	2			1	4			4
May		55	21						1		5		2				2	2	1		1	1	1				5
June		49	28					1			3	1	1				6		1	2		1					12
Totals		156	85																												
Lewis—	15,514																														
April		21	12								2	1	1				1		3			1		1			2
May		18	8										1				1	1				1					4
June		21	10										2				2							1			5
Totals		60	30																												
Lincoln—	17,033																														
April		17	18			2					2		1				1	2	1	1		2	1	1	1		3
May		18	14								2							4	1		1			1			5
June		33	11			1							2				1	2				1					4
Totals		68	43																												
Linn—	25,253																														
April		52	21					1			2				2		1	2	4			1		1	1		6
May		46	18			1						1	1				1	4				2		1			7
June		50	14										2				3	5									4
Totals		148	53																												
Livingston—	19,453																														
April		21	24					2	1		1	1	1					3	3	2		3		1			6
May		20	14								2		1				2	2				4		1			2
June		31	15			1		1			1		1				2	3	1		1		1	1	1		1
Totals		72	53																												
McDonald—	13,539																														
April		12	7								1								1	1		1	1				2
May		5	2								1						1										
June		7	2										1									1					
Totals		24	11																												

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																					
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Macon—	30,868																									
April		60	26								1		1				2	4	4			1	1	2		1	9
May		43	30	1		1					3			3			2	1	2	1		2	1		1		11
June		49	28								4	1	1	1			3	5	2			2	3	1			5
Totals		152	84																								
Madison—	11,273																									
April		32	12	1					1	2	2	1	1							1							3
May		21	7								1						1		2								3
June		34	11								2		1				1	1	1								5
Totals		87	30																								
Maries—	10,088																									
April		17	9						1	2										3							3
May		13	6										1				1	2	1								1
June		18	3																		1	1					1
Totals		48	18																								
Marion (outside Hannibal)—	12,230																									
April		8	11					1			2						2	2	1								3
May		22	13			2		1			1		1	1				2		1		1	1				2
June		11	8									1					2	1		1		1		1			1
Totals		41	32																								

Hannibal—	18,341																														
April		30	22			1				2	5			1			1	3	3						1	1		4
May		27	22			4			1		2		2	1			1	1	1				1	1	2			5
June		20	23			1		1		1	3	1					5						2		3			6
Totals		77	67																										
Mercer—	12,335																														
April		21	4															1	2					1					
May		23	8										1				1	1	1				1		1			2
June		16	7														1	2	1									3
Totals		60	19																										
Miller—	16,717																														
April		38	8					1							3					1								3
May		45	16						1	4			1	1	1		1		1				1		1			4
June		27	7						1				1					1		1								3
Totals		110	21																										
Mississippi—	14,557																														
April		22	15								4	1	1				3	1	1	1					1			2
May		21	6	1							2																	3
June		27	16								1	1	1									1	1		1			10
Totals		70	37																										
Moniteau—	14,375																														
April		21	17								1	1	2				1	2	1	1	1	1			2			4
May		20	10														2	1		1					4			2
June		24	12								1						3						4					4
Totals		65	39																										
Monroe—	18,304																														
April		16	18							1				1			1	5	2	1					1			6
May		29	14			1	1		1				1					2	3									5
June		39	18			3					2		1				2	1					3					6
Totals		84	50																										
Montgomery—	15,604																														
April		27	15								2			1				5	1				1			1		4
May		17	20	1							3	2					1	4	1				4	1	2			1
June		12	6								1								1				2					2
Totals		56	41																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																										
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Morgan—	12,863																													
April		23	6								1				1		1					1		1			1
May		18	6																1								5
June		26	6								1						1	2	1								1
Totals		67	18																											
New Madrid—	19,488																													
April		41	11								1						2		1		1	1					5
May		47	15								2		1				1		2					1			8
June		44	17								3							1			7			2			4
Totals		132	43																											
Newton—	27,136																													
April		51	23							1	6	2					1	2	6	2		1		1			1
May		59	36		1	1	1	2			5		4	1			2	1	4			1	1		1		11
June		40	26					1		1	1							5		1		2		1		1	13
Totals		150	85																											
Nodaway—	28,833																													
April		39	22	1								1	5				1	1	2			2		2	1		6
May		39	14			1											3	2			1	1	1	1			4
June		41	19								1	1	1				1	1		1	1	4					8
Totals		119	55																											

Oregon—	14,681																												
April		39	5				1		1	1									1		2								3
May		33	11								3									2	2			1	1				1
June		24	9																	2	1		1	1					1
Totals		96	25																										
Osage—	14,283																												
April		43	14				1	1												3	2			1					6
May		32	10								3								1		1	1							4
June		23	10																2	2		1		1		2			2
Totals		98	34																										
Ozark—	11,926																												
April		36	8						3	1											1			1		1			1
May		43	9							1		1		1							1		1						4
June		39	6			1				3																			2
Totals		118	23																										
Pemiscot—	19,559																												
April		51	26							3									1	3	5	1	1	1	1	2		1	7
May		39	19							2											3		1		1	2	1		9
June		22	17							3	1												2			2			9
Totals		112	62																										
Perry—	14,898																												
April		28	7							1		1							1		2			1					1
May		33	15	1					1			1							1		2					1			8
June		25	16	1																	1	1	1	1		2			9
Totals		86	38																										
Pettis (outside Sedalia)—	16,091																												
April		16	14								1	1								2	3		1						6
May		24	10				1					1							1	3	1			1					2
June		15	9						1	3										1	2		1	1					
Totals		55	33																										
Sedalia—	17,822																												
April		22	27	1		5													1	4	2		1	3		2	1		7
May		35	23			2			1	1			1						2	1	2			6	1		1		5
June		30	20	1		1				5		1							3			1		4		1			3
Totals		87	70																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910.	Total births during the quarter.	Total deaths during the quarter.	Typhoid Fever.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Tuberculosis of the lungs.	Other forms of Tuberculosis.	Cancer.	Diabetes.	Epidemic Cerebrospinal Meningitis.	Acute Anterior Poliomyelitis.	Other diseases of the nervous system.	Diseases of heart and circulatory system.	Pneumonia, Broncho-pneumonia.	Other diseases of respiratory system.	Diarrhoea and Enteritis (under 2 years of age).	Acute Nephritis and Brights Disease.	The puerperal state.	Accidents.	Suicides.	Homicides.	Other causes.
Phelps—	15,796																										
April		28	23	1				1	1		2		1				1	3	3			3					7
May		23	16	1							1						2	6	2			1					2
June		22	12								1						1	2	3			2					3
Totals		73	51																								
Pike—	22,556																										
April		32	28			2			1	2	2		1				1	3	4			2		4			6
May		30	21			1					3			1			1	2	1			2		2			8
June		25	18				1			1	2		1				1	3			1	2		1	1		4
Totals		87	67																								
Platte—	14,429																										
April		34	12			1	1					1	1				1	1	1			1		1			3
May		13	14	1		2					1	2	2				2	2						2			
June		16	16									1		1				2	1				1	6	1	1	2
Totals		63	42																								
Polk—	21,561																										
April		52	20	1		2					2	1	1				2	1	4	1		1	2	1			1
May		47	18			2			1		1	1	2					3	2			1	1	1			2
June		45	17			1					2		3				1	3	1		1	1		1			3
Totals		144	55																								

Pulaski—	11,438																												
April		27	14	1			1			1	1	2	1	1				2				1					3
May		38	8								1						1		2								4
June		32	12								2			1			1					2	1				5
Totals		97	34																										
Putnam—	14,308																												
April		23	17			1					1			1			2	1	3			1	1	1			5
May		26	12								1	1	2				1	3	1			1		2			
June		32	7								1		2				1	2				1					
Totals		81	36																										
Ralls—	12,913																												
April		22	13			1					2						4		4			1		1			
May		10	6								1		1					1						1			2
June		25	13						1		2		2									2	1				5
Totals		57	32																										
Randolph—(outside Moberly)—	15,259																												
April		20	19								3		1					1	3			4		1			6
May		31	14			2					2	1					1	1	2	1		1		2			1
June		28	10								2		1				2	2					1	1			1
Totals		79	43																										
Moberly—	10,923																												
April		23	9						1		2	1	1					2				1		1			
May		11	15								3		3					1			2		1	1			4
June		18	8			1							1											2			4
Totals		52	32																										
Ray—	21,451																												
April		44	13						1	1		1	2				2	1	1			1		1			2
May		41	12						1		3						2	1	1								4
June		30	12								2		3								1	1		1	1		3
Totals		115	37																										
Reynolds—	9,592																												
April		35	12			1							1						3	2		1		2			2
May		25	7			1		1					1		1					1							2
June		20																										
Totals		80	29																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910.	Total births during the quarter.	Total deaths during the quarter.	Important causes of death. Typhoid Fever.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Tuberculosis of the lungs.	Other forms of Tuberculosis.	Cancer.	Diabetes.	Epidemic Cerebrospinal Meningitis.	Acute Anterior Poliomyelitis.	Other diseases of the nervous system.	Diseases of heart and circulatory system.	Pneumonia, Broncho-pneumonia.	Other diseases of respiratory system.	Diarrhoea and Enteritis (under 2 years of age).	Acute Nephritis and Brights Disease.	The puerperal state.	Accidents.	Suicides.	Homicides.	Other causes.
Ripley—	13,099																										
April		16	1								1																
May		19	13								3						3		1					1			5
June		24	9								2						1			1							5
Totals		59	23																								
St. Charles—	24,695																										
April		32	14								2						1		1	2		1		2			5
May		36	28								3	1	3					4	2	3				2	1		9
June		43	18										2				1	5				1		3	1		5
Totals		111	60																								
St. Clair—	16,412																										
April		21	11										1				3	1	1			2		1			2
May		24	12				1						1				2	1				1		1			5
June		32	12								1		2					1				2		1			5
Totals		77	35																								
St. Francois—	35,738																										
April		83	35			1					8	1	1				5		4	1	1			1			12
May		87	46	1			1		1		6	1	2				1	2	4	3	2	2		3		2	15
June		51	26	2				1			3		2				1		1		3	5		1			7
Totals		221	107																								

Ste. Genevieve—	10,607																														
April		27	7			1												1			1	1							1	2
May		5	4					1			1									1										1
June		15	9					1			1										1							1		5
Totals		47	20																												
St. Louis—	82,417																														
April		146	118			2					51	1	4					5	16	11	3		2	2	6	2				13
May		121	97			2			1		41	1	5	1				4	8	4		4	5		4	2	1			14
June		109	97	1					2	1	43	2	4						11	2		2	4		7	3	1			14
Totals		376	312																												
Saline—	29,448																														
April		44	27	1							3							7	3	2	2		1	1						7
May		65	31					1			5	1	1	3				5	5	1	1				2					6
June		38	16								3	3	1					1	4				1		1					2
Totals		147	74																												
Schuyler—	9,062																														
April		17	6							1				1				1		1			1							1	
May		10	8	2							1				1			1	1		1									1	
June		22	6								1	1						2					1							1	
Totals		49	20																												
Scotland—	11,869																														
April		18	9			4				1									1	1										2	
May		16	7					1			1								1	1					1					2	
June		10	9								1								1	1			1		2					3	
Totals		44	25																												
Scott—	22,372																														
April		79	20						1		3								2	3	1	1			1					8	
May		57	19								3	1						1	2	2	1		1	1						7	
June		55	34							1	4	2						1		1	1	4	1		2	2				15	
Totals		191	73																												
Shannon—	11,343																														
April		43	6							1	1																			4	
May		25	11	1							1		1							2	1		1	1						3	
June		23	8																	1		1								6	
Totals		91	25																												

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

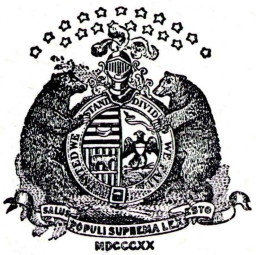
Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																					
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Shelby—	14,864																									
April		30	21								1			1			1	4	2			3	2		1		6
May		26	9								1							1	1			4					2
June		30	9								1	1						2				3	1				1
Totals		86	39																							
Stoddard—	27,807																									
April		71	23	3					2		2						2		2	1			2				9
May		54	21	1							3							1	1	1	2						12
June		64	26							1	2		1				2	3	3		6						8
Totals		189	70																							
Stone—	11,559																									
April		23	2								1																1
May		23	8					1				1		1			1	1	2								1
June		18	5														1				1	1					2
Totals		64	15																							
Sullivan—	18,598																									
April		45	18							1	1		1				1	3	1				1	2	1		6
May		55	19			1					3		1						3		1			1			9
June		39	16								4		1	1			1	4						1			4
Totals		139	53																							

Taney—	9,134																												
April		30	10								1								1	1	1								6
May		23	7							1	1										1								4
June		27	10	1																	2								7
Totals		80	27																										
Texas	21,458																												
April		54	15			1					1		1					1	2	1	1			2	1			4
May		44	10								2		1						1	1								5
June		39	12								3	1	2					1					1					4
Totals		137	37																										
Vernon—	28,827																												
April		44	35			1					3		3					4	2	3	2		2		3	1		11
May		32	26								4		2					4	5				3			1		7
June		38	27							1	2	1	3					4	5				1	1	1	2		6
Totals		114	88																										
Warren—	9,123																												
April		11	7											1					2	1	1								2
May		7	6															1	1						1				3
June		7	4																4										
Totals		25	17																										
Washington—	13,378																												
April		28	14								4		1						2	1	2	1		1		1			1
May		24	9								2							2				1							4
June		21	8										1							1	1	1				1			3
Totals		73	31																										
Wayne—	15,181																												
April		37	20							2			1					2		5	1			1					8
May		26	8								1		1						1	1	1								2
June		22	3								1								1										1
Totals		85	31																										
Webster—	17,377																												
April		39	18			1					2	1						3		3	1			2					5
May		40	10								3		1							1			2		1			2
June		41	12								2		1					3		3			1						2
otals		120	40																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING JUNE, 1913
Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death																								
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Worth—	8,007																											
April		17	6														1	1	1			1					2
May		10	3															1									2
June		15	5								1		1					3										
Totals		42	14																									
Wright—	18,315																											
April		49	12	1						2	3							1	1								4
May		41	8			1							1					1	1				1				3
June		31	11								4							2				1		1			3
Totals		121	31																									
St. Louis City—	687,029																											
April		1,203	915	7		22	9	1	13	6	89	8	49	11	7		43	167	98	28	28	88	11	32	28	10	160
May		1,072	901	3		11	8	3	12	2	85	20	68	11	4		44	153	82	18	23	77	7	36	18	9	207
June		1,044	867	3		9	2	2	9	2	80	13	67	13	4	2	39	125	50	18	48	97	5	51	14	5	209
Totals		3,319	2,683																									
Total for State—																												
April		6,073	3,503	34	2	112	19	27	28	59	381	46	146	40	27		227	467	404	106	70	229	66	164	66	24	759
May		5,176	3,199	36	2	78	24	34	25	11	375	54	185	39	18		188	443	243	60	67	223	40	149	45	22	838
June		5,322	3,057	32		40	10	21	23	13	342	56	184	29	7	2	183	384	131	50	147	229	31	174	53	23	893
Grand totals	3,293,335	16,571	9,759	102	4	230	53	82	76	83	1098	156	515	108	52	2	598	1294	778	216	284	681	137	487	164	69	2490

MISSOURI
STATE BOARD OF HEALTH



QUARTERLY BULLETIN

NEW SERIES

VOL. 3 OCTOBER-DECEMBER, 1913 NO. 4

MEMBERS OF THE BOARD

CONTENTS.

Published at Jefferson City **Entered as second-class matter**

BULLETIN OF THE

Missouri State Board of Health

NEW SERIES

VOL. 3 OCTOBER-DECEMBER, 1913 NO. 4

Notice of Communications from Superintendents of State Hospitals.

In response to requests made a short time ago we have articles from the superintendents of State hospitals bearing on tuberculosis and other contagious diseases as to detention, segregation, general management, etc. Also an article from Dr. Walter McNab Miller bearing on the same subject. These articles are printed in this bulletin.

These letters are very interesting, showing the work being done in these institutions and also indicating a need of a more liberal appropriation that our unfortunates may be taken care of properly and promptly. It seems to me these articles will stimulate all to see that the right thing is done in providing everything that is necessary for the speedy relief and cure of those afflicted with mental diseases. None know the needs quite so well as the superintendents of these institutions, therefore let us ask the Legislature to make provision for the things they ask for.

Thanks to Local Registrars and Doctors.

At the close of the year 1913 we are pleased to thank the local registrars and physicians throughout the State, for the interest shown in vital statistic reports. These courteous and fairly prompt reports indicate that 1914 will be a banner year for promptness and correctness in making out certificates. Yet many physicians in their haste fill out these certificates in writing that is hardly legible. This tends to give the transcriber, at this end of the line, thoughts that would not be appropriate to send over the telephone. We simply have to guess at some of the signatures, they are so poorly written. And many of these poorly written certificates, after deciphering the signatures, we find are written by doctors high up in

the profession. It seems to me that this can be corrected. We therefore suggest and ask each and every doctor to print his signature to every certificate.

Antirabic Serum.

Since August our bacteriologist, Dr. Geo. H. Jones, has received four specimens for examination for rabies, all from different sections of the State and all showing positive proof of the disease. We are entering into arrangements with the surgeon general, United States Army, whereby he will be able to obtain the antirabic vaccine free. After the first of March, 1914, this office will be able to give free treatment to all those who need treatment for rabies.

Board Meeting.

The State Board of Health will meet in St. Louis, Mo., at the Jefferson Hotel, February 9, 10 and 11, 1914, to hold examinations for licenses to practice medicine, surgery and midwifery. Midwives will be examined on the 11th at 9:00 o'clock a. m. Each day the examination will begin at 9:00 o'clock a. m. sharp.

On the 12th the Board will meet to transact any business which may come before it.

Some Comments Upon What Has Been Accomplished and What is Needed for the Care and Treatment of Tuberculosis Patients in Missouri.

Since the illustrious Koch in 1882 discovered the real cause of tuberculosis there have been strenuous efforts by Koch himself (up to the time of his death) and other scientists over different parts of the globe to find some remedy that would exert direct influence upon the tubercle bacilli. Various serums have appeared upon the scene with primarily bright futures and passed into oblivion before many moons, as also various and sundry drugs as means to kill the tubercle bacilli, with the same results in the end.

Tuberculous patients have been preyed upon by every "quack institution" and every "patent medicine vendor" in the land. They have also been the victims of Christian Science, osteopathy and every other nefarious creed to which the human flesh is heir, and still the same results, no benefit. Finally, the fresh air, rest and nutritious diet theory has come forward with such brilliant results

that there is no longer any doubt that incipient tuberculosis is a disease that yields very readily to that sort of treatment, and with proper care of the patient after the disease has been arrested there is no reason for a recurrence. The sanatorium treatment is more effectual than any other. And now from ocean to ocean and from British America to the Gulf of Mexico and throughout all countries of Europe the sleeping porch has been adopted. The educational advantages of this method cannot be overestimated. The patients learn how to take care of themselves after leaving the sanitorium, and each one becomes a missionary to his fellowmen along lines of treatment and prevention. The Missouri State Sanitorium, located at the beautiful and historic little city of Mt. Vernon, has passed through its early trials and discouragements, as all new institutions of every kind do, and is now well established and doing service to suffering humanity far beyond the hopes and expectations of its most sanguine supporters. On August 17, 1907, the first patient was admitted. There was only one building for patients, employes and officers, but the all-important sleeping porch was there, the rest was given, and the nutritious diet of milk and eggs. This patient remained about one year, and was discharged as an arrested case with a knowledge invaluable as how to take care of himself for all time to come.

Since the date above mentioned this institution has received over 1,100 patients for treatment. Unfortunately, some were received that were beyond the incipient stage and were not benefited, which shows the great importance of early diagnosis. This institution has three large buildings for patients and one other about half finished, which will be completed early in 1914. There are now eight large buildings upon the two hundred acres belonging to the State. This tract of land is about the highest in all Missouri, being about 1,400 feet above sea level, making it 700 feet higher than Kansas City and nearly 1,000 feet higher than St. Louis. This altitude makes it ideal for tuberculosis patients.

Missouri is one of the wealthiest states of the American Union and fifth in population. It has been demonstrated beyond all doubt what can be accomplished at this institution, and it is up to the citizens of the State to bring about methods to take care of more patients.

We have four insane asylums with approximately 4,000 inmates; also have an Asylum for the Feeble-minded and Epileptic and one for the Deaf and Blind. The number of tuberculous patients

in our State who need sanatorium treatment is far in excess of the number in all the other State institutions combined. We need this institution enlarged by appropriations by each General Assembly and, above all things, we need a place for advanced cases of tuberculosis. We frequently have cases that are too far advanced to be benefited, and there should be an institution near this one where they could be sent. We need a place where they could be taken care of, getting them away from incipient cases and thereby lessening the danger of reinfection. This kind of a place should be provided as soon as possible, and if one of the advanced cases should sufficiently improve it would then be an easy matter to take him to the institution for incipient cases.

Every county and city examiner for this sanitorium should urge their representatives in the State Legislature to agitate the question of enlarging the facilities for the treatment of tuberculous patients. This question should be of vital interest to all the citizens of Missouri, and I believe by the combined efforts of the superintendents of schools, and the clergy, and all the professional men throughout the State, we could take the matter up with our representatives and do a great deal toward getting this much-needed institution. There is a high point a short distance from these grounds that would be an ideal place to locate it. The electricity and other conveniences could be furnished from here. I believe that it is entirely within the range of possibility, and that within a few years tuberculosis may be almost a thing of the past, and by the co-operation of all the professional and commercial world great things can be accomplished. May it never be allowed to be quieted until everything has been done that should be to bring before the entire universe this the most important question before the people today.

B. HUGHES, M. D.,
Superintendent Missouri State Sanitorium for the Treatment of Incipient Tuberculosis, Mt. Vernon, Mo.

Management of Tuberculosis at State Hospital No. 3.

Dr. Adcock has asked me for an article on the manner of receiving and management of patients at Hospital No. 3 who are afflicted with contagious and infectious diseases, with especial attention to the management of tuberculosis. Patients afflicted with contagious diseases, such as smallpox, measles and like troubles,

are not received at all if it is known at the time of application for admission that they are so afflicted, but tubercular patients are received quite frequently.

We have at the present time, out of a population of 1,170 patients, about 40 who are known to be tubercular and are occupying our tubercular wards. These tubercular patients are received in the same way that all patients are received on entering the hospital, by being sent to the receiving ward until such time as they may be classified and sent to the ward in which they properly belong.

The classification of all patients is based on mental condition alone, except where the physical conditions are such as to necessitate the sending to the hospital ward or, in case of tuberculosis, to the tubercular ward. In case a patient is physically ill as well as mentally ill, we disregard the rule of classifying according to a mental basis and send the patient to the hospital ward, where the best attention possible may be given and a special diet administered. This mental basis rule is also disregarded with the tubercular, and the tuberculous patient is sent from any ward in which discovered direct to the tubercular ward without any regard whatever to the mental condition.

All tubercular suspects are at once given a thorough physical examination and the sputum, when possible, is examined for bacillus. The family history is also examined into and all information possible gained, and if indications point to tuberculosis the patient is at once removed to the tubercular ward for treatment.

About two years ago two tubercular cottages were erected at this institution, one for the male and one for the female patients. Previous to this time there was no effort made, I believe, to segregate the tubercular patients. These cottages are built at some distance from the main building and are very well suited for the purpose for which they were erected, although the location chosen for each is not an ideal one by any means.

These cottages are long and narrow, with just room enough on either side the center for a row of beds, and the sides are made up entirely of windows that may be opened or closed as desired. The construction of these cottages is such as to give a maximum amount of fresh air and sunlight, and when the weather will permit many of the patients are placed on the porch in front or allowed the freedom of the yard.

No special treatment is being used at the present time on tubercular patients. We segregate the patients, place them on

special diet, allow them the maximum amount of ozone and sunshine and make their surroundings as pleasant as possible. This kind of treatment we find to be very effective in those who have recently been attacked by the disease, but in case of long standing and considerable emaciation, the best we can hope to do is to prolong life for a little season, and in the meantime make life as pleasant as possible for these unfortunates.

WILL P. BRADLEY, M. D.,
Superintendent Hospital No. 3.

Nevada, Mo., December 13, 1913.

Caring for Contagious and Infectious Diseases at State Hospital No. 2.

St. Joseph, Mo., December 5, 1913.

J. A. B. Adcock, M. D., Secretary Missouri State Board of Health, Jefferson City, Mo.:

Dear Doctor—I have your letter of recent date asking for information as to our methods of management in caring for contagious and infectious diseases in State Hospital No. 2, with special reference to tuberculosis.

That our facilities for handling such patients are meager and unsatisfactory is undeniable, and that the obstacles in the way of giving them proper care are prodigious no one familiar with existing conditions can deny.

In the matter of caring for acute, infectious and contagious maladies, such as smallpox, diphtheria and scarlet fever, no provision has been made. When the first named loathsome disease made its unwelcome appearance on our receiving ward in 1911 our only refuge was the pesthouse of Buchanan county. Fortunately the first case occurred in a mild type of congenital imbecility. The patient was quiet and tractable and we had no trouble in securing her admission, but when later another case developed in violent form of insanity other arrangements were imperative. Basement rooms, not thought desirable for ward purposes, were utilized, and the 36 cases were there cared for without a death.

Owing to the constant growth of our poulation the quarters then used as an isolation ward have been improved in every way possible, and are now in service as the terminal station on the highway of mental degradation, so that another visitation of the same disease would find us sadly unprepared to meet the demands.

A detention ward where patients could be held under observation beyond the period of incubation of eruptive diseases would effectively bar the door to a repetition of the sad experience of former years, but such a ward or building has never been a part of the equipment of this hospital. It would at the same time give opportunity during that period to study the mental maladies of those thus confined, and secure a better and more satisfactory classification.

While it is true that some means of protection should be afforded our helpless population against smallpox, diphtheria and scarlet fever, there is an enemy more terrible than either, or all three combined, whose toll of human life is garnered daily on the wards of American institutions, where mental diseases cause the isolation of more than 165,000 men and women. Both in penal and eleemosynary institutions the hand of the State should be laid in blessing and benediction on those whose minds and morals make them enemies to the peace and welfare of society. To maintain conditions which imperil the lives of either class of unfortunates is unbecoming to the Christian Commonwealth and a disgrace to those who have charge of such institutions. That there are difficulties in the matter of segregation of tubercular patients in insane hospitals no one doubts, but that it can be done we have proven in this hospital.

Prior to the building of the three-story, reinforced concrete and wire-screened tubercular sleeping porches on wards 42, 43 and 44 on the male side and on wards 36, 37 and 38 on the female side, the Von Pirquet scarification test was applied to every suspected case in the hospital, and the result showed 10 per cent of our population with tubercular taint. The difficulties in the proper conduct of this test will be apparent to every physician, and the large number indicating the presence of the disease casts some doubt upon its absolute accuracy. As soon as these porches were completed all active cases were removed with all their belongings, and they spend all their sleeping and waking hours there, practically in the open air. Sputum cups and napkins were made compulsory, and the concrete floors were daily scrubbed and the walls were given sanitary attention. All patients showing an elevation of temperature were kept in bed during the hours of febrile disturbance, and special diet appropriate to each case was prescribed. The combined capacity of the six wards and porches above enumerated gave accommodations for 181 patients, while the number of

suspects and possible cases was 142. After two years of trial and the continuance of segregation the number of tuberculars has shown a surprising decrease, and two wards are now more than ample to care for them, one on the male side and one on the female side.

All cases on entering are examined with reference to tubercular tendencies. The physical examination is thorough and is supplemanted by temperature and sputum tests, and the slightest evidence of the disease causes their transfer to one of the tubercular wards, where their further observation is continued until the evidence in each case is complete. With a monthly admission averaging 30 patients constant vigilance is necessary to keep receiving and other wards free from cases that are a physical menace to healthy patients, and thereby prevent the spread of the disease. Medical science has not yet discovered the essential or sovereign weapon of defense against this scourge of humanity, but the methods of handling such cases and isolating and hedging them about have been fruitful of good results. Climatic conditions are not especially favorable here, but a life in the open air, both for sleeping and waking hours, will do much to check the progress of the malady and strengthen the system to resist its further progress. A careful and seemingly accurate census of our tubercular population recently made reveals only 24 cases in a population of 1,530 patients.

Very respectfully,

A. C. PETTIJOHN,
Superintendent.

The Receiving, Segregation and Care of the Insane.

(By G. E. Scrutchfield, M. D., Superintendent State Hospital No. 4, Farmington, Mo.)

The lack of knowledge on the part of the laity concerning facts and conditions which prevail in insane hospitals is everywhere apparent, and shows itself even in the most casual conversation concerning the management and care of insane patients. Not long since a prominent citizen asked me whether or not I carried firearms on my visits among these unfortunates. Another gentleman asked me which I found to be the most useful weapon in the handling of the insane, the weapon most trusty and effective in laying low the victim when occasionally he frowned or wildly gesticulated. The latter gentleman preferred himself to be equipped with an automatic revolver and a trusty blackjack, and he was sincere in

advising this same warlike equipment for myself. The absurdity of such remarks and such advice, coming as it does from men of standing, can only be attributed to what I have previously stated—that is, a real lack of knowledge on the part of the public concerning these institutions. I am of the opinion that if the public knew more of the real aims and practices in our State psychic hospitals, we would not then have these benighted inquiries and misbeliefs as to what is really going on in these institutions; instead if all the facts and circumstances concerning these hospitals were fully known, we would have a more humane sympathy, a more hearty co-operation and a more liberal allowance for all such charitable institutions. The public will learn to respect the psychic hospital, just as they now respect the general hospital, only when a better acquaintance is had with the work that is being done in receiving, segregating and caring for the insane. When psychic hospitals surround themselves with the same scientific, humane, business-like atmosphere that now surrounds and is considered essential for the general hospitals, then and then only will the insane hospital come into its own heritage at the hands of the public. Alienists especially, every doctor and every charitable organization as well, should make every possible effort to educate the public to place the proper value upon psychic hospitals and what is being done in them, not alone from a humanitarian standpoint but from an economic viewpoint as well.

During the last ten or fifteen years we have progressed from mere retreats or asylums to hospitals; from the carrying of firearms, blackjacks and bludgeons to the kind, temperate, humane nurse administering to those unfortunates who are unable to minister to themselves. When the public is taught to realize that these institutions are hospitals in fact as well as in name for the treatment of sick and diseased minds, and that of all those who may enter our portals, none are given over to therapeutic nihilism and thus foredoomed without first having had an honest effort made in their behalf. In physical sickness the prognosis may be fairly and definitely stated in days, weeks or months; not so in psychical sickness. The time needed for the mental reconstruction is as variable as is the patient's individuality, and here the danger of "psychological fallacies" must ever be kept in mind. The mistake of the family, or of some careless doctor, or of some friend is that they seek to reason the patient away from his delusions, being unmindful of the fact that the delusions are feeling processes and

are not reasoning processes, and that the sheer weight of the morbid feeling reinforces the morbid idea and sets it beyond the reach of cold reasoning. It too often happens that the psychic sick are kidnapped by their relatives or some official, and as a result upon entering the hospital their anxiety, their feelings and their doubts are only increased by this uncalled for deceit. Open, firm frankness would have been preferred in all cases.

Mental readjustment in all psychoses is a slow and variable process, depending upon the individual. The patient is out of harmony with his environments, he sees the world through blue, or at best through misty glasses. Too often he feels that he has not been fair and openly dealt with by members of his family, by his physician or by whoever have had first to do with the case. While it is true that these patients are sent to us as being insane, it does not necessarily follow that they are impressionless to their new environments. In most cases the converse is true. On being received the first impression of doctors, nurses, wards, beds, clothing, and the conduct of the other patients may have and does have considerable to do with the handling and with the final outcome of the case. This brings us to the consideration of where and how to receive our mentally sick, emphasizing as it does the fact that too many of our psychic hospitals have inadequate and unfit receiving wards. If we err in the receiving and err in the first treatment given to our insane, these facts must in themselves be deeply deplored, both from a humanitarian and from an economic standpoint, for in so erring we not only mistreat our patient, but we further help to deplete our commonwealth by withholding a producer therefrom longer than probably it would have been necessary had a proper understanding and a proper realization been had of the importance of the proper receiving of these patients. The responsibility of receiving and administering the first treatment to the insane is great, and he who discharges it faithfully must necessarily be informed and must be alert to the possibilities, and he must be thoroughly imbued with the nature and character of the malady with which he proposes to deal. We shall err on the right side, if err it will be, by assuming that all our patients are indeed sick, and that their condition demands quietude, rest and bed treatment. On being received at the psychic hospital the patient should be carefully and kindly bathed and examined physically. He should be disrobed and put to bed in a clean, quiet and well-ventilated ward. He should be impressed with a kindly attendant,

an intelligent physician, and he should be made to feel that he is in a hospital maintained especially, just as it should be, for such sickness as his own. He should receive such medical care and attention and such diet as his particular condition demands. He should be kept on this receiving ward just so long as it is necessary to impress him, to study him and to see that he is absolutely free from all contagion. After his probable auto-intoxication, his secretions and his emunctories have been properly observed and studied, and after a tentative diagnosis and classification has been made, he can then be safely sent to another ward for further study, and possibly for another classification and diagnosis. The method of receiving and the first handling of the insane is fraught with great possibilities for the weal or for the woe of these unfortunates. Those who are custodians of the insane must realize this point or they must necessarily fail in the very beginning of their treatment. It is lamentably true that too many of our psychic hospitals are built architecturally only, and that proper receiving wards were never contemplated in the erection of these buildings. Our ideas of the management and treatment of the insane are changing for the better. Brick and mortar or the lack of brick and mortar should not impede our progress. I maintain that an up-to-date receiving ward is one of the most valuable adjuncts of the psychic hospital, and if the same is not provided, then the State is penny-wise and pound-foolish, retrogressing instead of progressing. With the awakening which has been so general in the psychiatric circles new methods of procedure have come into vogue and entirely new forms of activity have manifested themselves.

The insane hospital should be a place of research; we must never lose sight of the fact that every advance has resulted only from careful study and prolonged search. Every public insane hospital has within its walls a large amount of material for research which is too often disregarded. Every insane hopital should have a complete bacteriological equipment and a competent man to use it. There are always analysis, tests and counts to be made which, if neglected, deprive us of a valuable source of information and handicap us in our work. This important line of work is too often neglected simply for the want of money with which to carry it on, the money being withheld forsooth because our legislators were not forcibly enough impressed with the needs of these hospitals. *In a modern psychic* hospital the question of segregation is an important one, when we consider that these hospitals are too

often made humane dumping grounds. It is but humane to separate the tidy from the untidy, the disturbed from the quiet, the infirm from the more active, the epileptic from the nonconvulsive and the contagion-carriers from all the rest. Probably one of the most serious undertakings of the superintendent of an insane hospital is to prevent the dissemination of tuberculosis. The difficulty in physical diagnosis in the insane can scarecly be appreciated by those not accustomed to this line of work. The deteriorated cases in our insane hospitals, even in advanced stages of tuberculosis, often do not cough and do not expectorate; on the other hand, maniac types are liable to infect the entire hospital corps. In considering the tubercular insane we have to deal not alone with the individual case, but we must safeguard the health of every officer, attendant, visitor and patient who may be thrown in contact with the disease. From this viewpoint the superintendent must not hesitate to do his duty in the matter of segregation, but he must act wisely and quickly, and must segregate all those cases which are liable to spread infection. The housing and treatment of the tubercular insane should follow along the modern lines of fresh air and sunshine; suffice it to say that the modern insane tubercular cottage must be prepared for hard usage from frequent scourings and scrubbings with strong disinfectants, and it must be further safeguarded against all accidents and escapes.

In Hospital No. 4 we have segregated our tubercular insane, but the building is absolutely inadequate in size, arrangement and location. In every insane hospital the tubercular patients thereof demand four compartments for their proper segregation—one for the incipient males, one for the advanced males, one for the incipient females and one for the advanced females. Therapeutic nihilism should find no place here, for the incipient tubercular patient, although he be insane, may be returned to society well both in body and in mind.

With the new conception of insanity on the part of medical profession and with the inevitable awakening on the part of the public, our psychic hospitals will come to be respected other than mere asylums and retreats. When we consider that approximately 25 per cent of all the insane can be restored, then is it not worth while to labor earnestly in this work of mental reconstruction? During a ten-year period Hospital No. 4 received 2,000 patients; of these cases 524 were discharged and sent back to the State as having apparently recovered, the percentage of recoveries being 26

per cent plus. During the last few years our conception of mental diseases has been almost revolutionized, and with this has come many changes in the treatment and in the care of these patients. The part which the individual psychic hospital is to play in keeping pace with the modern progress must depend largely upon the ability of the superintendent, but no superintendent, no matter how great, can do great deeds with inadequate appropriations for carrying on this work. In order to secure proper financial aid the public must know and realize that today our insane are being humanely cared for, and that they are handled, housed and segregated as living, highly hopeful units; that they are not thrown together in a forlorn foredoomed mass beyond hope and beyond individual reconstruction, but each one is separately given a chance.

The Popular Campaign Against Tuberculosis in Missouri.

The Missouri Association for the Relief and Control of Tuberculosis is waging an aggressive campaign in the State through the schools with the Red Cross Seal. In this campaign there is brisk demand for the elementary and fundamental facts pertaining to the nature of tuberculosis, its means of transmission, its prevention and its cure by physicians, clergymen and other people of the State who are interested in its social and economic welfare. To meet this demand the following amplification of an outline of a lecture or sermon on tuberculosis, widely distributed by that association through the State, has been prepared by the secretary of that association for use in this issue of the bulletin.

Tuberculosis is an infectious and communicable disease caused by the growth of the tubercle bacillus within the body. This baccillus is a vegetable parasite, rod-shaped, and of such length that it would require 10,000 of them laid end to end to measure an inch. It lives a strictly parasitic life, which signifies that under ordinary circumstances it does not live indefinitely and propagate its kind outside of its living host, which may be man, almost any domestic animal, or one of the many animals that have not been brought under domestication. Though incapable of propagating itself outside of its living host, it is capable of living for a long period of time under favorable conditions outside of the body.

These conditions which most favor the prolongation of its life outside of the body are darkness, moisture, and ordinary temperatures. It dies in a few minutes when exposed to direct sunlight,

when not deeply imbedded in the albuminous discharges from the lesions which are characteristic of the disease. In the human body the commonest form of tuberculosis is consumption, or tuberculosis of the lungs, but it may occur in any part or organ of the body, especially in the bones, joints and lymph glands of children, in which structures it is known respectively as white swelling of bones and joints, and scrofula. It is a very common cause of hunchback and of meningitis in children.

The tubercle bacillus in the body stimulates the growth of cells which, under the influence of toxins or poisons which are elaborated by the bacillus, die, disintegrate, and are given off from the body in the form of discharges that are peculiar to the organ or tissue in which the lesion is located, e. g., from the lungs as sputum, from scrofulous glands and white swelling as pus, and from the intestines in the feces. All these discharges are capable of starting the disease in the healthy, whether by being taken into the stomach, inhaled in the lungs or by the inoculation of open superficial cuts and wounds.

PREDISPOSING CAUSES.

Approximately ten per cent of all cases of tuberculosis occurring in children have resulted from the ingestion of milk or meat from tuberculosis animals. Tuberculosis is not inherited as was formerly supposed. It is *always* acquired through infection from some other case by the transmission of the tubercle bacillus either directly or indirectly. Because it is a germ disease it is preventable and curable, not unavoidable and fatal as until recently it has been regarded. All people are not equally susceptible to the disease. Those who are in a weakened physical condition or who lack proper and sufficient food, or who are addicted to the use of alcohol, or who have suffered from grippe, colds, measles, typhoid, pleurisy, etc., or who take insufficient rest, or exercise too little in the open air, or sleep in close rooms, or work in a moist, dark or dusty atmosphere, are predisposed to the disease.

While tuberculosis is not essentially a disease of the poor and destitute, it is with this class of people that it is most prevalent.

COMMONEST EARLY SYMPTOMS.

The commonest early symptoms of the disease are persistent cough or cold lasting a month or longer, hoarseness, loss of weight and appetite, run-down feeling, slight fever in the afternoons, night sweats, spitting of blood or streaks of blood in the sputum.

Any one, or any combination of these symptoms, should lead one to suspect tuberculosis and he should consult a physician immediately. If the physician cannot find a cause for these symptoms, in nine cases out of ten they should be attributed to tuberculosis. It is most important that the disease be recognized early so that timely treatment may be begun. Most cases of tuberculosis that have been diagnosed in the incipient or very early stage, under modern methods of treatment, are cured.

TUBERCULOSIS IN CHILDREN.

Tuberculosis is a house disease, a disease of the home. It runs in families, not because inherited, but because of home association. It is probable that most infections occur in childhood, though the disease may not develop to the point of recognition until late in life. It is acquired by children through kissing, caressing, use of common eating utensils, and from playing on an infected floor. A consumptive in the family may be the means of transmitting the disease not only through spitting, but by coughing, sneezing, and even by speaking into the face of another.

HOW TUBERCULOSIS MAY BE PREVENTED.

The sputum which a consumptive raises should be received in a cuspidor containing an antiseptic solution, or he should cough or spit into a napkin or onto a paper held before his face, and these then should be thoroughly disinfected or burned. The prevention and treatment of tuberculosis rest upon the principles that have been set forth above. They are:

1. Early and frequent examination in suspected cases and of all individuals of a family in which tuberculosis is known to exist or to have existed.
2. The control and destruction of all tuberculous discharges.
3. To live and sleep in the open air as much as possible.
4. No tuberculous patient should sleep in the bed or even in the room with an unafflicted person.
5. Proper food in sufficient quantity.
6. Plenty of sleep.
7. Absolute rest in bed when the temperature is over 99 degrees, or the pulse is over 100.

These conditions are best obtained in the early stages of tuberculosis in a sanitorium, in the advanced stages in a hospital. All treatment of tuberculosis should be under the direction of a physi-

cian, whether at home or in an institution. All patent medicines and alcohol must be avoided.

An important adjunct to the treatment of incipient tuberculosis at home in children is the open-air school; in adults, the day camp or the night camp.

WHAT IS BEING DONE TO PREVENT TUBERCULOSIS.

In its broader aspects the campaign against tuberculosis includes popular and systematic school education and social or visiting nursing. Under popular education are included free lectures, exhibits, whether local or traveling, moving picture plays, lantern demonstrations, special popular educational literature in the form of circulars or magazine articles, and newspaper publicity and visiting nursing. Under systematic school education may be included lectures, natural science lessons, recitations, the organization of Red Cross Seal selling campaigns, and the employment of school nurses and the medical inspection of school children. This systematic educational work should be graded in adaptation to the age and maturity of the pupil, and should be illustrated and demonstrated in the various ways employed in the teaching of natural science so far as possible.

The general movement against tuberculosis includes also the securing of proper state and municipal legislation, as well as cooperation with all movements for the betterment of living and working conditions.

THE COST OF TUBERCULOSIS.

In Missouri in 1912 tuberculosis killed 4,940 persons. It killed one-ninth of all who died. It killed one-third of all who died between eighteen and forty-five years. It cost in dollars and cents approximately $35,000,000, which was approximately two and one-half times the total cost of the Missouri public schools for all purposes. It is estimated that the number of people having active tuberculosis in Missouri is not less than 30,000.

HOW YOU CAN HELP.

1. *Teachers.*—By instructing pupils as to the nature, prevention and care of tuberculosis; teaching children simple rules of health, how to breathe deeply, etc.; keeping the classroom well ventilated and by insisting upon the medical inspection of school children.

2. *Parents.*—By keeping the home clean and well ventilated; teaching children to sleep with windows open, to eat proper and

nourishing food, to observe the laws of health, to keep the teeth clean and in repair.

3. *Children.*—By keeping clean; by not putting anything into your mouths except food; by staying as much as possible in the fresh air and sunshine; by eating only wholesome and nourishing food; by always washing the hands before eating.

4. *Everyone.*—By taking care of your own health; by stopping indiscriminate spitting; by joining in the movement to stamp out tuberculosis; by buying and otherwise promoting the use of the Red Cross Christmas Seal; by insisting upon the employment of county-paid tuberculosis visiting nurses; by promoting the organization of a county or district tuberculosis hospital in your community.

HERE ARE SOME OF THE THINGS THAT MUST BE DONE.

1. Every city and village must have an ordinance, and enforce it, forbidding spitting in public places or in public vehicles.

2. In every case of death from tuberculosis the house occupied by the patient must be properly disinfected.

3. When a case of tuberculosis is found in a family, other members must be examined to learn if they be infected.

4. Every city and county must have a tuberculosis visiting nurse.

5. All living cases of tuberculosis must be reported to the health officer.

6. Every living case of tuberculosis must be sent to a hospital or sanitorium, or must be under proper care at home.

7. Every county must have a tuberculosis hospital for advanced cases.

HELP SAVE MISSOURI—5,000 LIVES A YEAR.

For further information pertaining to the fight against tuberculosis in the schools, in the home, anywhere, address

DR. W. MCN. MILLER,
Secretary the Missouri Association for the Relief and Control of Tuberculosis, Columbia, Mo.

The double cross which, for ten years or more, anti-tuberculosis societies and institutions have been using as a symbol or emblem of their fight against tuberculosis, has recently been standardized by the National Association for the Study and Prevention of Tuberculosis. In this use it was formally adopted by the International Anti-Tuberculosis Association in Berlin in 1902, when it was proposed by Dr. C. Sersiron of Paris. He took the shape of the cross from the common Croix de Lorraine and the cross of the Greek Catholic Church. The emblem is being used today by anti-tuberculosis workers in every part of the world.

In the standardized emblem the width of the cross is the unit of measurement and all angles in the points are of forty-five degrees. The same proportions are maintained in all sizes, varying in length from ½ inch to 6½ inches or more.

Anti-tuberculosis societies may obtain these cuts from the Missouri Association for the Relief and Control of Tuberculosis, Columbia, Mo., for use on stationery and literature, at cost price.

A DOCTOR OF THE OLD SCHOOL.

I can see him still as in the long ago,
With his beard so long and white as snow,
Hanging two feet below his chin;
And the hair on his head was white and thin.
His face! A face beloved by all,
A forehead broad and grand and tall,
The sparkle of life in his deep blue eyes,
To look into them was to realize
That the soul within was great and good;
Kindness and charity he understood,
Stooped were his shoulders and frail his frame;
Old Doctor Marshall—that was his name.
Our old family doctor—everybody's friend,
Always ready his helping hand to lend,
Simple were his manners and gentle his ways,
A little old-fashioned, as they say now-a-days.
But he gave to all the best he had,
And many are the hearts that he made glad,
He was all that was noble and great and grand,
Yet so humble a servant that all could command,
The rich, the poor were alike to him,
Not to answer a call he deemed a sin.
His work he held sacred, his calling high,
As I now see his goodness methinks you and I
Might well emulate him, his kindness and beauty
By mixing his virtues with our own daily duty.
He lived true to his calling, God's worthy tool,
For he was a doctor of the old, old school.

—Arthur G. Bosler.

A RECOVERY.

"There was a "doc" not in our town.
Both wise and dignified;
He cut a man's appendix out,
But sewed his tools inside.

And when he saw his tools were gone,
With all his might and main,
He quickly ripped the basting threads
And got his tools again."

BACTERIOLOGIST'S REPORT.

Bacteriological Laboratory.

	Tuberculosis (Sputum)	Typhoid	Diptheria	Water	Gonorrhoea	Malaria	Rabies	Tuberculosis (Not sputum)	Miscellaneous	Total
October	188	155	73	52	8	19	3	8	28	534
November	184	105	73	50	17	6	.....	7	15	457
December 20th	136	63	40	43	6	6	2	3	11	310
Totals	508	323	186	145	31	31	5	18	54	
Grand totals	.....	.....	.....	.....	.....	.....	.....	.....	.....	1,310

Tuberculosis, per cent positive	28.7
Typhoid, per cent positive	44.2
Diptheria, per cent positive	50.5
Water	62.7

Preparation of Specimens for Sending to the Laboratory.

Sputum.—Regulation sputum outfits may be obtained by addressing the State Bacteriologist, Jefferson City, Mo. Full directions accompany each outfit. Physicians are urged to use this means of sending specimens of sputum to the laboratory.

Blood.—It is impossible to examine a single specimen of blood for both typhoid and malaria. For the Widal test for typhoid, the blood is best obtained by pricking the lobe of the ear with a flat or a three-cornered needle, or the point of a knife. The ear should first be rubbed with cotton and alcohol, then dried, and the needle should be sterile. Two or three good-sized drops should be collected on filter paper provided by the laboratory for this purpose.

For *malaria* the blood is obtained in the same way, but must be spread in a thin, even smear on a glass miscroscope slide. This is done as follows: A small drop of blood is received onto the slide near one end by touching the slide to the blood as it hangs from the lobe of the ear. The slide is then laid on a firm flat surface, and the end of a second slide, held at an angle of about thirty degrees with the first slide and touching it, is brought into contact with the drop of blood. In two or three seconds the blood will have

run across the slide at the point of contact. Then the second slide is pushed along on the first with a moderate speed, so as to leave a thin, even smear on the surface of the first slide. A second smear may be made in a similar manner on the other slide. *Caution:* Have slides perfectly clean, handle only by the edges and work rapidly. Allow them to dry in the air without heat.

Blood should never be placed between slides and sent to the laboratory.

Swabs for diphtheria.—The regulation tube and mailing case, to be obtained from the county health officer or from the State Bacteriologist, should be used for this purpose. Full directions accompany each outfit.

Water.—Specimens of water are examined for the potability, chiefly determined by the absence or presence of colon bacilli, an index to sewage pollution.

For a total bacterial count it is imperative that all samples be iced from the time of taking until they reach the laboratory. For this purpose special containers may be obtained by addressing the laboratory and paying the express charges both ways.

Pus.—Pus, to be examined for gonococci, should be sent on a slide prepared as follows: A small amount—much less than a drop—should be mixed on the slide with a small drop of water and spread over an area a half inch or more in diameter, and allowed to dry. Do not press slides together.

Rabies.—Unless the animal shows symptoms of rabies, it should not be killed, but should be held for observation, in which event death will result in a very few days, in ample time to begin treatment of patient. Do not kill the animal by a blow or shot in the head, as this may make a proper examination impossible. The head only of the animal should be sent, and that at the earliest possible moment. The head is to be placed in a tin bucket with a tightly fitting cover, which bucket is to be placed in a larger wooden or iron bucket surrounded by sawdust and ice. The heads of animals freshly killed may be sprinkled with salt, packed in wet sawdust in a strong wooden box and expressed.

Urine.—Specimens of urine are examined for tubercle bacilli in suspected cases to genito-urinary tuberculosis.

In sending urine to be examined for tubercle bacilli, the following points should be carefully noted:

1. The specimen should be obtained by catheter, and drawn directly into a sterile bottle.

2. It should be stated upon the card accompanying the specimen that it was obtained by catheter.

3. Two or four ounces of urine should be sent and preservative should be used.

Feces.—Feces will be examined for tubercle bacilli, and for the ova of intestinal parasites (hookworm).

Water Examinations.

December 20, 1913.

Dr. J. A. B. Adcock, Secretary, State Board of Health, Jefferson City, Mo.:

Dear Doctor—In compliance with your request of recent date, I have made a bacterial analysis upon eight specimens of water received from Dr. G. P. Alton, Gashland, Mo. The findings upon the same were as follows:

Date, December 16, 1913.	Total bacteria per I. C. C.	Colon bacilli fermentation I. C. C.	Litmus lactose agar.
1 Schoolhouse well	70	— — ‡	—
2 Endicott's cistern	450	— — ‡	—
3 Koenneker well	850	— — ‡	—
4 Adkin well	950	— — ‡	—
5 Wright cistern	130	— ‡ ‡	‡
6 Street's well (at store)	190	‡ ‡ ‡	‡
7 Koenneker's spring	240	‡ ‡ ‡	‡
8 Linden lake	260	‡ ‡ ‡	‡

From the above results I would say that Numbers 5, 6, 7 and 8 show dangerous amounts of colon bacilli.

Samples 2, 3 and 4 do not show the presence of colon bacilli, but the total bacterial count per I. C. C. is above the limit for a safe drinking water. However, as these samples were transported uniced, contrary to instructions, the conditions were more favorable for a multiplication of bacteria. Therefore I could not say that these results would be a fair test of the various sources in their present state.

Waters showing the presence of colon bacilli or a high total bacteria count are dangerous to public and private health and should not be used for drinking purposes unless boiled or otherwise treated.

Upon such waters of questionable quality, I would advise that bacterial analysis be made at least every three months.

Yours very truly,

GEO. H. JONES, M. D.,
State Bacteriologist.

Reports of Examinations.

The number of water examinations have greatly increased during the last quarter. A number of these were municipal supplies and made at the request of the State Board of Health and of the Public Service Commission. A great number of specimens have been received of individual supplies, reports upon results of which seem to be the cause of repeated inquiries upon the part of the individual sending the specimens.

In reports of examination the absence of colon bacilli means that the water is free from sewage pollution. Presence of colon bacilli means one or more of several things:

1. Sewage pollution in greater or less amount.
2. Accidental introduction of the germs in taking the sample.
3. Their presence in small numbers may have no significance.

The uncertainty of these positive reports is the source of a good deal of misunderstanding.

A notable source of misunderstanding is in regard to typhoid bacilli. Examination is not made for this organism for the following reasons:

1. The procedure required a great deal of time in order to arrive at a definite conclusion.
2. Typhoid bacilli often do not live long in water, and a negative finding in such a case might lead to very serious results.
3. The test for colon bacilli, which are always present in water containing typhoid bacilli, is a comparatively simple one; therefore it is no longer a part of the routine work of public health laboratories to search for typhoid bacilli in drinking water. If colon bacilli are reported absent, the water is safe from a bacteriological standpoint. If reported present it is open to suspicion, at least, and may be decidedly unfit to drink without boiling.

VITAL STATISTICS.

Summary Showing Comparison of Important Causes of Deaths and Number of Births in the State During July, August and September, 1913.

There was an increase of 408 deaths during the third quarter for 1913, comprising the months of July, August and September, as compared with the same quarter for 1912. The births show a slight falling off, there being ninety-two less reported for the corresponding period in 1912.

Statistics show there was a total of 10,183 deaths during July, August and September of the present year, of which 5,666 were males, 4,517 females, 9,275 white and 908 blacks. The month of August shows the highest number of deaths (3,586), and September the lowest (3,206).

All forms of tuberculosis resulted in 1,029 deaths, or 10.1 per cent of the total for the quarter. For the same period in 1912 there 1,099 deaths from tuberculosis, or seventy more than in 1913.

Typhoid fever caused 352 deaths, an increase of 90 over the same quarter of 1912. Diseases of the heart netted 1,108 deaths, or 10.88 per cent of the total number of deaths for the three months.

Other important causes of death were: Cancer, 534; smallpox, 2; measles, 33; scarlet fever, 14; whooping cough, 108; diphtheria and croup, 71; influenza, 13; diabetes, 111; epidemic cerebrospinal meningitis, 18; acute anterior poliomyelitis, 23; dieases of the nervous system, 551; pneumonia, 217; diarrhoea and enteritis, 648; accidents, 643; suicides, 145; homicides, 84.

There were 19,473 births during the quarter. Of this number, 10,060 were males; 9,413 females; 19,036 whites and 437 blacks.

The December report from Registrars throughout the State not being available until after January 10, 1914, rendered it impossible to give the statistical report in this bulletin for the quarter including October, November and December, 1913.

The statistical tables following this summary give the total number of births and deaths, by counties, occurring during the quarter.

U. A. McBRIDE, Statistician.

TABLE SHOWING BIRTHS FILED WITH THE CENTRAL BUREAU OF VITAL STATISTICS DURING MONTHS OF JULY, AUGUST AND SEPTEMBER, 1913, BY SEX AND COLOR.

(STILLBIRTHS EXCLUDED.)

Month.	Total.	Male.		Female.	
		White.	Black.	White.	Black.
July	5,989	2,962	82	2,882	63
August	6,720	3,404	70	3,182	64
September	6,764	3,456	86	3,150	72
Totals	19,473	9,822	238	9,214	199
Totals by sex		10,060		9,413	

TABLE SHOWING DEATHS IN THE STATE FROM TWENTY-FOUR IMPORTANT CAUSES, FILED WITH THE CENTRAL BUREAU OF VITAL STATISTICS DURING THE MONTHS OF JULY, AUGUST AND SEPTEMBER, 1913, (STILLBIRTHS EXCLUDED).

Causes.	July.	Aug.	Sept.	Total.
Typhoid Fever	76	148	128	352
Smallpox	.....	1	1	2
Measles	21	9	3	33
Scarlet Fever	10	3	1	14
Whooping Cough	41	45	22	108
Diphtheria and Croup	14	18	39	71
Influenza	6	4	3	13
Tuberculosis of the Lungs	298	294	298	890
Other forms of Tuberculosis	53	47	39	139
Cancer	163	193	178	534
Diabetes	36	38	37	111
Epidemic Cerebrospinal Meningitis	10	3	5	18
Acute Anterior Poliomyelitis	13	5	5	23
Other Diseases of the Nervous System	165	181	205	551
Diseases of Heart and Circulatory System	359	411	338	1,108
Pneumonia, Bronchopneumonia	75	57	85	217
Other Diseases of Respiratory System	66	58	36	160
Diarrhoea and Enteritis (under 2 years of age)	380	358	262	1,000
Acute Nephritis and Brights' Disease	222	209	217	648
The Puerperal State	42	37	37	116
Accidents	216	246	181	643
Suicides	42	45	58	145
Homicides	33	25	26	84
Other Causes	1,050	1,151	1,002	3,203
Totals	3,391	3,586	3,206	10,183

DEATHS IN MISSOURI FROM SEVEN IMPORTANT EPIDEMIC DISEASES AND RATE PER 100,000 POPULATION FOR THE MONTHS OF JULY, AUGUST AND SEPTEMBER, 1913.

Diseases.	Months.		
	July.	Aug.	Sept.
Typhoid Fever	76	148	128
Measles	21	9	3
Scarlet Fever	10	3	1
Whooping Cough	41	45	22
Diphtheria and Croup	14	18	39
Epidemic Meningitis	10	3	5
Acute Poliomyelitis	13	5	5
Totals	185	231	203

Total deaths from the seven causes	619
Death rate per 100,000 population	19.10

Births and Deaths Reported in Missouri (Stillbirths Not Included) During the Quarter Ending September 30, 1913.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Broncho-pneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
				Important causes of death.																							
Adair—	22,700																										
July		25	20						2		3		2				1	1			1	1		1	1		7
August		46	24	1				1	1		1		1					3		1	2	4		1			8
September		52	31			1			1		1		2				2	5		1	4	2		1	1		10
Totals		123	75																								
Andrew—	15,282																										
July		25	14								1		3			1		2		1	1	1					4
August		27	10	1													1				1	1					6
September		28	12										1	1		1	1	3	1		1						3
Totals		80	36																								
Atchison—	13,604																										
July		16	11										2				1	1		1		2		1			3
August		29	14														1				3	1	1	1			7
September		21	8								1		1					1			2				1		2
Totals		66	33																								
Audrain—	21,687																										
July		37	20	1							2	1	1	1			2	3		1		1		1	1		5
August		45	18	2							1	1					1	5			2	1	1	2			2
September		28	12								3	1	2				2	1						1			2
Totals		110	50																								

Barry—	23,869																													
July		40	13	1				1						1			1			1			2			1			5
August		76	17	3				1			1		1					2				1			1			7
September		34	20	4					1				3			1	3	1				1	1					5
Totals		150	50																										
Barton—	16,747																													
July		28	12								1		1					2	1					3			4
August		31	13								2		2					2				1			1			5
September		25	10	3								1	2	1														3
Totals		84	35																										
Bates—	25,869																													
July		36	23			1		1	1		4		2				3	2					1					8
August		50	12	1		1					1		1									1						7
September		57	19								1		4				1	2				1	3					7
Totals		143	54																										
Benton—	14,881																													
July		14	9	2							1		1									1	1					3
August		34	6								1		1												1			3
September		26	9	1							1							1				1		1	1			3
Totals		74	24																										
Bollinger—	14,576																													
July		23	10								1							3	1				1					4
August		30	6	2							2											1						1
September		33	8														4	1										3
Totals		86	24																										
Boone—	30,533																													
July		46	25			1		1			2	1	1				3	5				1			1			9
August		51	30					1			5	1	3				1	4	1				3		2			9
September		36	24	1				2			4		1				4	1	1			1	1					8
Totals		133	79																										
Buchanan—	15,517																													
July		24	14								2						3	2				1	1	1	3			1
August		29	22	1							3							2				3	3		2	1		7
September		36	19								1							5				2	1		4			6
Totals		89	55																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																						
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
St. Joseph—	77,403																									
July		115	99	6		1					7	2	6	1			8	10	3	3	8	9		5	2	4	24
August		136	111	4							8		6	4			14	15	4	2	9	7	1	9	1	1	26
September		118	89	4				1			9	2	9				16	7	3	1	5	9	2	3	1	1	16
Totals		369	299																							
Butler—	20,624																									
July		56	40	1							1	1					2	1			6	2	1	6		1	18
August		50	42	1							2	2			1		1	1			7	2	1	1			23
September		93	31								2								1		4	1					23
Totals		199	113																							
Caldwell—	14,605																									
July		27	7								1		1					1			1	1		1			1
August		18	12										2				1	3			1			1			4
September		31	10									1	6								1						2
Totals		76	29																							
Callaway—	24,400																									
July		41	37	1							6		3				1	6			2	2		1	1		14
August		40	36	1							3		3	1			8	5			1	1		1		1	11
September		38	30	1							3	2	1	2			4	2		1	1	2		1			10
Totals		119	103																							

Camden—	11,582																												
July		20	4									1					1												3
August		20	6																			1							4
September		28	9	1							1						2												5
Totals		68	19																										
Cape Girardeau—	27,621																												
July		48	22	3			2		2	2		1	1						1	4			1						5
August		65	30	5			1		2	1		1					1					1		2					16
September		54	23	2				1				1					2	3			3		1	2		1			7
Totals		167	75																										
Carroll—	23,098																												
July		46	17							1			1			4	3			1			1						6
August		41	34	1								1	1				3		1	2		1	11	1	1			11
September		51	23							5	2	1				3	2			1	3		1						5
Totals		138	74																										
Carter—	5,504																												
July		11	5										1			1				1	1		1						
August		14	6							1																			5
September		10	4																										4
Totals		35	15																										
Cass—	22,973																												
July		25	17							3							1			1	2	1	2	1					6
August		48	18									1					5			1	1		1	1					8
September		44	10									2	1				1		1		1		1			1			2
Totals		117	45																										
Cedar—	16,080																												
July		19	14				3					2				1				1			1						6
August		51	11							1		1	1			2	2						1						3
September		29	15									4				1	3				2		1						4
Totals		99	40																										
Chariton—	23,503																												
July		41	17	1						2		1					1			4	1		1						6
August		43	14	1							2						1			1	1		1			1			6
September		55	16	2						1						1	2			2			2						6
Totals		139	47																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																								
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Christian—	15,832																											
July		41	14								2				1		1	2			2			1			5
August		38	19	1					2		2	1						2									11
September		25	7								1		1	1			1										3
Totals		104	40																									
Clark—	12,811																											
July		16	7															2			2	2		1				
August		20	11								2		1					2						1	1		4
September		20	12	1										1				2	1			1					6
Totals		56	30																									
Clay—	20,302																											
July		30	17					1			3		2						1		2	5	1	1			1
August		50	32	3				1			1		1	1			2	4	1		3	2		3			10
September		45	19	1							2						1	3			3	1		4	1		3
Totals		125	68																									
Clinton—	15,297																											
July		31	10								1			2							2	1		1			3
August		29	16								2						3	4				2					5
September		37	12	1							2	1						3				1		1			3
Totals		97	38																									

Cole—	10,107																												
July		14	4								1								1		1		1			1			
August		16	21					1			2		2					1			2	2	2			1			8
September		24	8	1							1																		6
Totals		54	33																										
Jefferson City—	11,850																												
July			9								1			1				1	2	1		1			2				
August		23	10								3		2					1					1		1				2
September		18	14								4		1					1					2		2		1		3
Totals		41	33																										
Cooper—	20,311																												
July		37	22	1							3	1		1				2	2	1		3	1				1		6
August		39	17	2									1					4	2	1		1	1						5
September		46	15	1								1	5	1					1		1		1	1	1				2
Totals		122	54																										
Crawford—	13,576																												
July		21	10	1							1							1				1	2	1					3
August		26	7	2			1					1						1					1						1
September		45	18	1							3		4						2			1		1	1	1			4
Totals		92	35																										
Dade—	15,613																												
July		31	12	1							1			1				1	1		1				1				5
August		33	18							1	1											1	1		1				13
September		22	5								1		2						1						1				
Totals		86	35																										
Dallas—	13,181																												
July		16	8	2								2						1							1				2
August		73	6																						1				5
September		27	7								1							1		1						1			3
Totals		116	21																										
Daviess—	17,605																												
July		29	10								1							2	1				1				1		4
August		39	20								1		3	1				2	3			2	1	1	1		1		4
September		34	13	1					2		2		1									1	1						5
Totals		102	43																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
				Important causes of death.																							
DeKalb—	12,531																										
July		18	11								1			1			1	2									6
August		27	7									1					1	1									4
September		29	10								1			1				2	1	1				1			3
Totals		74	28																								
Dent—	13,245																										
July		15	8			2							2				1										3
August		20	7								2										2	1		1			1
September		33	11								2					1	1				1	2	1				3
Totals		68	.26																								
Douglas—	16,604																										
July		36	8															2			1		1				4
August		47	13					1			1			1				1			4						5
September		47	6	2							1																3
Totals		130	27																								
Dunklin—	30,328																										
July		118	47	2		2			1		3						1				7			1			30
August		122	43	3		1											2			1	7			1			28
September		122	65	3					4		3		1					2			5	1		1			45
Totals		362	155																								

Franklin—	29,830																												
July		56	20			1		1	1		1								1			2	4	1	1	1		6
August		54	13								1		3						2			2			1			4
September		71	21								1		1					1	3			1	1		2	1		10
Totals		181	54																										
Gasconade—	12,847																												
July		28	9															1	1			2	2				1	2
August		26	17	2		1					2								1			1	1		1			8
September		25	13								4								1	1		2	3					3
Totals		79	39																										
Gentry—	16,820																												
July		31	8								2	1		1				2										2
August		38	10								1		1					1	1		1	1						4
September		28	8								1							1	1			1	1					3
Totals		97	26																										
Greene (outside of Springfield)—	28,630																												
July		40	19								2	1	2			1	1	2	1		1	1		1		1	5
August		38	16	2							1	1	1				1	2	1		2							5
September		48	16	2							1							2		1	2			1				7
Totals		126	51																										
Springfield—	35,201																												
July		82	42	2				1			4	1	1			1		5	1		3	3		3	2		15
August		54	38	3				1			1		1					2			2	2	1	2			23
September		65	49	3							6		3				4	2	1		4	2	1	1	1		21
Totals		201	129																										
Grundy—	16,744																												
July		25	15								2						3						1	2			7
August		31	21			1					1		1				1	5			4	2					6
September		29	17	1							1		3				1	2	1		3	1					4
Totals		85	53																										
Harrison—	20,466																												
July		50	14										2				2	1			2	1		1			5
August		39	14	2													1				2	1					8
September		57	20	1							3		2				1	3			1	1		2			6
Totals		146	48																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																							
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Broncho-pneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Henry—	27,242																										
July		45	20					1			2	2					2	3			3	2					5
August		48	22	1									2				1				2			4			12
September		47	19								2		2					1				2		3			9
Totals		140	61																								
Hickory—	8,741																										
July		14	5														1	2									2
August		23	7	1																		1					5
September		16	5														2	1									2
Totals		53	17																								
Holt—	14,539																										
July		25	13										1	1		1		4									6
August		29	15	3							1		1			1								1			8
September		24	10										1				4	2									3
Totals		78	38																								
Howard—	15,653																										
July		15	22									3	1				1	2	1	2	4	3					5
August		17	14										2					3			2	1		3			3
September		32	5															3	1								1
Totals		64	41																								

Howell—	21,065																												
July		33	20	1				1			5						1	1				2						9
August		46	20	3							2		1	1				1				1		1	1			9
September		40	16	3													2	2			1		2			1	5
Totals		119	56																										
Iron—	8,563																												
July		26	7														2									2	3
August		12	15								4		1								3					1	6
September		24	12	1							1						3	2			2			1			2
Totals		62	34																										
Jackson (outside of Kansas City)—	35,141																												
July		45	30								1		3				2	7	1		4	1		1			10
August		55	35	1					1		4	2	3				2	6		2	1	2	1	3			7
September		83	25								1						2	2				1	2	4	1		12
Totals		183	90																										
Kansas City—	248,381																												
July		444	341	6		2		6			29	6	14				16	33	6	8	46	30	2	26	9	4	98
August		478	404	14	1			3	1		29	5	29	6	1	2	8	55	6	8	35	30	3	43	6	5	114
September		424	272	9		1	1	2	1	2	26	8	14	4	2		13	31	10	3	17	18	3	22	13	5	67
Totals		1,346	1,017																										
Jasper (outside Joplin and Webb City)—	45,783																												
July		70	48	2		2	1	1		1	7		2					2		1	6			5		1	17
August		78	46	4				1			2		1				4	6			10		1	2	1		14
September		97	31	2				1	1		8	3					2	3		1	1	1	1	2	1		4
Totals		245	125																										
Joplin—	32,073																												
July		56	40	3					1		6	1	1		2		3	3		1	4			3	3		9
August		59	29	1				1			4	1					3	3			3		2	1	1	1	8
September		55	46	2							7		6	1			1				2	5	1	6	3	1	11
Totals		170	115																										
Webb City—	11,817																												
July		43	14								3			1	2			2			1			1			4
August		19	21	2							6		1				1	1			4			1		2	3
September		47	13	4				1			4										1						5
Totals		109	48																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																				
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Jefferson—	27,878																									
July		58	23			1					1	1	2					3		1	2	2		1			9
August		54	21			1		1						1			2	1	1		3			1			10
September		62	29	2					1		1	1					2	5			3	1		4			9
Totals		174	73																							
Johnson—	26,297																									
July		49	30								2		4				1	2			10	2					
August		44	22					1			3						1	3		2	2	2		1			7
September		53	19	2							1		3				2	2				1		3			5
Totals		146	71																							
Knox—	12,403																									
July		15	7								1	1	1								1						3
August		12	10								1											1		1			7
September		31	6																					1			5
Totals		58	23																							
Laclede—	17,363																									
July		28	7	1														1									5
August		36	12								1									1	1						9
September		37	13						2				1					3				1					6
Totals		101	32																							

Lafayette—	30,154																												
July		49	39	1		1		4			3		4				1	6	1		2	3		2			11
August		85	42	1				2			3	1	5				2	8			4	1	1	3		1	10
September		55	18									1				1		3	1					3			9
Totals		189	99																										
Lawrence—	26,583																												
July		56	22	1		1					2		3		1		3	2		2	1			1			5
August		66	25								4		2	1			2	1			2		1	1			11
September		66	28	2					1		3		3				4	2	1			1		1			10
Totals		188	75																										
Lewis—	15,514																												
July		23	15								1	1						1		1	3		1				7
August		19	13								1						2	1			1	2		2			4
September		22	7										2								2	1					2
Totals		64	35																										
Lincoln—	17,033																												
July		35	11			1					2			1				2				1					4
August		33	10								2		4				1	3									
September		36	11	1									1					2			1	1		1			4
Totals		104	32																										
Linn—	25,253																												
July		41	16											1			1	3			2	1					8
August		50	33	2				1		1	2		1				5	3	1	1	3						13
September		66	20								1		1	1				4	2	1	5			1			5
Totals		157	69																										
Livingston—	19,453																												
July		33	13								1		1				1	3			2			1			4
August		38	17								1			1				5		1	1	2			1		5
September		31	20	2							1		2					2	1	1	4	2		2			4
Totals		102	50																										
McDonald—	13,539																												
July		8	1																										1
August		9	5								1						1												3
September		8	1								1																		
Totals		25	7																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																					
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Macon—	30,868																									
July		39	15			1							1					3		1	1			1			7
August		48	27	1							1		3	1			2	3			2	3	1	2		1	7
September		56	27	1								1	1	1			5	3	2			3			1		12
Totals		143	69																							
Madison—	11,273																									
July		24	8															2			1					5
August		24	11	1							2							1			1	1				5
September		36	16	3					1		3		1	2				1								5
Totals		84	35																							
Maries—	10,088																									
July		20	7															1		1	3					2
August		25	13	1							1		2				2	2					1			4
September		18	5	1															1							3
Totals		63	25																							
Marion—	12,231																									
July		17	7										1				2				1					3
August		18	7								1						1	3					1			1
September		23	10								2						1	1				2	1			3
Totals		58	24																							

Hannibal—	18,341																												
July		24	24								4					1	1	2			6			1			9	
August		28	21								3		1	2				1			3			1			10	
September		32	23								3		1	2			3	3	1		2	1		1				
Totals		84	68																										
Mercer—	12,335																												
July		23	3	1													1				1								
August		26	6										2				1					1		1			1	
September		19	7								1		1					1			1	2		1				
Totals		68	16																										
Miller—	16,717																												
July		34	4										1		1						1						1		
August		33	16	2							1	1	2				1				1						8		
September		40	11								1										2						8		
Totals		107	31																										
Mississippi—	14,557																												
July		23	20	1							2					1					9	1				1	5		
August		26	14	2			1						1								3			2			5		
September		31	15	2							1		1				1				3		1	1			5		
Totals		80	49																										
Moniteau—	14,375																												
July		33	15	2									1			1	1		1								9		
August		26	8	1									2							1		1					3		
September		37	13	1							1		1					1			1	3			1		4		
Totals		96	36																										
Monroe—	18,304																												
July		29	18	1							2						1	3	1			2		2			6		
August		22	12	1							3						1	4						1			2		
September		32	12	1							1		2	2							1	1	1		1		2		
Totals		83	42																										
Montgomery—	15,604																												
July		26	9									1	2					1				1					4		
August		39	15	1			1										1	2				3		1			6		
September		40	13						2		2						1	1			1	2					4		
Totals		105	37																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																								
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Morgan—	12,863																											
July		19	8	1							3	1					1	1		1								
August		26	8	1						1							1	1		1				1				2
September		37	3															1			1							1
Totals		82	19																									
New Madrid—	19,488																											
July		47	20	1				1			1		1						2		5							9
August		41	27	1							2										4		1	3				16
September		61	26		1				3		2		1				1		1		3	2		1				11
Totals		149	73																									
Newton—	27,186																											
July		103	21					1		1	2						1	2			3	1		1				9
August		60	30	2				1			1	2	1				1	6			3	2	1	2				8
September		71	13	1				1			1						1	3				3		1				2
Totals		234	64																									
Nodaway—	28,833																											
July		54	22										1				2	2				5		1				11
August		50	34	1								1	3	1			1	3	3		3	3		2				13
September		57	12	1									1				1	1	2		1	1	1	2				1
Totals		161	68																									

Oregon—	14,681																											
July		23	4							1									1			1					1
August		34	7														1				2	1					3
September		29	9	1							1					1										1	5
Totals		86	20																									
Osage—	14,283																											
July		38	10			1		1									1			1	1				1	4
August		41	13	2		1						2								3			1			4
September		35	5														1			1						3
Totals		114	28																									
Ozark—	11,926																											
July		27	13	2												2	2			1						6
August		35	12	4							2					1				3			1			1
September		35	6							1													1		1	3
Totals		97	31																									
Pemiscot—	19,559																											
July		45	19														2	1		3		1	1		1	10
August		61	20							1										6		1				12
September		58	25							2						1		2		3	1	1	2			13
Totals		164	64																									
Perry—	14,898																											
July		38	17	2								1	1			1	2			3	1	1				5
August		46	18	1				2		1	1					2	2			1			1			7
September		23	18	1						4	1		2			1				1	2					6
Totals		107	53																									
Pettis (outside Sedalia)—	16,091																											
July		12	8														1	1			2		1			3
August		25	9														1		1			2				5
September		15	14							1		3				2	1								1	6
Totals		52	31																									
Sedalia—	17,822																											
July		34	19						1	2		2				2				3			3			6
August		56	24	2						1	1	3					3	1		1	2			1		9
September		33	34	4				1		1		1	1			4	4		1	1	4		1	1	1	9
Totals		123	77																									

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death: Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Broncho-pneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Phelps—	15,796																										
July		23	13								5		1	1	1			2				3					1
August		29	11														1	3			2	2					3
September		28	8								2						1				1	1		1			2
Totals		80	32																								
Pike—	22,556																										
July		39	36	3							2		2	2			4	4	1		1	1		2			14
August		32	27	2							2	2	1				2				3	1		2			12
September		35	26	1							2		2					5				3			1		12
Totals		106	89																								
Platte—	14,429																										
July		34	12								1							1			1		1	3			5
August		37	13	1		2					1							3			1						5
September		21	11														1										10
Totals		92	36																								
Polk—	21,561																										
July		40	22									1	2	1		1	1	3			1		2				10
August		38	12								2		1					2			1	1	1				4
September		47	12	1				1			1						2	1				2					3
Totals		125	46																								

Pulaski—	11,438																												
July		28	12								1		2											1	2				6
August		27	7										1				1					1				1			3
September		24	12					1			2			1			1				1				1	1			4
Totals		79	31																										
Putnam—	14,308																												
July		35	8								1		4					1	1										1
August		25	14	1							1		2	1			1	3											5
September		38	17						1				1	1			1	2			2	1							8
Totals		98	39																										
Ralls—	12,913																												
July		17	14			1								1			1	1		1	1	1							7
August		28	10	1									1					1			1	1				1		4
September		8	1																										1
Totals		53	25																										
Randolph (outside Moberly)—	15,259																												
July		27	17					1			1		1					1			1	3	1	1				7
August		33	17					2				1						3	1		1			3				6
September		23	25								3		1				1	7			3	1	1		1			7
Totals		83	59																										
Moberly—	10,923																												
July		20	17								1			2			1	2			5			2				4
August		12	17	1				1			1						1	2	1	1				6				3
September		19	14								2	1					5	2	1						1			2
Totals		51	48																										
Ray—	21,451																												
July		24	21	1							2			2			1	1			3	1		2				8
August		57	30			1	1				2						1	4	1		6	1		5				8
September		44	18					1			2						2	1				1		2	1			8
Totals		125	69																										
Reynolds—	9,592																												
July		27	6					2													2							2
August		18	7	1				2									1						1					2
September		16	3								1		1															1
Totals		61	16																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																								
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 years of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Ripley—	13,099																											
July		13	11										1				1	1					1				7
August		39	10	1				1			2	1						1	1			1					2
September		55	9								1							1									7
Totals		87	30																									
St. Charles—	24,695																											
July		36	17									1	2					3	1	1	1	1	1	1			5
August		57	14	1							2		4				1	1				3					2
September		37	24	1							2		1				3	5			1	1		2	1		7
Totals		130	55																									
St. Clair—	16,412																											
July		24	12	1							4		1					1				1	1				3
August		29	15								2		2					4			1	2					4
September		38	5	2							1											1					1
Totals		91	32																									
St. Francois—	35,738																											
July		77	55					2			7		2				1	4			15	1		5		1	17
August		78	41	1			1	1	1		7	1	2	1			4				4	4		1			13
September		82	39	1					1		1	1	2				5	1	1	1	6	2	2		1		14
Totals		237	135																									

Ste. Genevieve—	10,607																												
July		24	13																	1	4			2				6
August		20	7	3													1										1	2
September		26	7	1														1			1			2				2
Totals		70	27																										
St. Louis—	82,417																												
July		111	116				4				37	3	1	1			7	8		3	9	7		11	4			21
August		169	97	2				1			29		2				4	12	4		6	1		13	4	1		18
September		131	79	2					2		28		1				5	6	2	4	3	4		4	1			17
Totals		411	292																										
Saline—	29,448																												
July		38	35					3			1	2	2				4	4		1	4	2		2				10
August		61	39	2				3			1	2	1				2	6	1		7	2		2				10
September		64	24								1						1	5			4	4						9
Totals		163	98																										
Schuyler—	9,062																												
July		18	2																			1						1
August		6	6					1					1					2			1							1
September		24	5															1										4
Totals		48	13																										
Scotland—	11,869																												
July		12	10					1										1	1		1			1				5
August		19	4															2	1			1						
September		26	13					1				1					1	3			1	1						5
Totals		57	27																										
Scott—	22,372																												
July		48	18														1	2	3		7	1						4
August		78	30								1	1	1					3			10	1				1		12
September		75	31	3							2						3	2			4	1		2		3		11
Totals		201	79																										
Shannon—	11,334																												
July		27	6			1														1	1							3
August		27	12	1									2				1	2			1		1					4
September		39	8	1							1						1							1				4
Totals		93	26																										

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910.	Total births during the quarter.	Total deaths during the quarter.	Important causes of death.																						
				Typhoid Fever.	Smallpox.	Measles.	Scarlet Fever.	Whooping Cough.	Diphtheria and Croup.	Influenza.	Tuberculosis of the lungs.	Other forms of Tuberculosis.	Cancer.	Diabetes.	Epidemic Cerebrospinal Meningitis.	Acute Anterior Poliomyelitis.	Other diseases of the nervous system.	Diseases of heart and circulatory system.	Pneumonia, Bronchopneumonia.	Other diseases of respiratory system.	Diarrhoea and Enteritis (under 2 years of age).	Acute Nephritis and Brights Disease.	The puerperal state.	Accidents.	Suicides.	Homicides.	Other causes.
Shelby—	14,864																									
July		21	6	1							1						1				1			1			1
August		21	11	1							1	1	1	1			2										4
September		17	20	2							1		2					2	1		1	4		1			6
Totals		59	37																								
Stoddard—	27,807																									
July		78	22								1	2					1	1		1	5		1	1			9
August		98	45	1					1		5		2					1	2	1	5	2		7			18
September		75	31	2					4		1	1	2				3	1			6						11
Totals		251	98																								
Stone—	11,559																									
July		20	10								1							1			4		1	1			2
August		27	7																								7
September		20	10					1	1		1							1				1					5
Totals		67	27																								
Sullivan—	18,598																									
July		43	12								2		2				1	1			2			1			3
August		39	12	1				2									2					2		1			4
September		60	15								1		1	1			1	1	2		1	1			1		5
Totals		142	39																								

Taney—	9,134																												
July		17	7	1				1	1											1		1	1					1
August		22	8								1										1	3			1			2
September		15	6	1															1				1	1			1	1
Totals		54	21																									
Texas—	21,458																												
July		33	18	1				1	1		2	1					1	2		1	2		1	1				4
August		68	13					1			2								1			1			1			7
September		58	12										1				3	1	1				1					5
Totals		159	43																									
Vernon—	28,827																												
July		61	32							1	3						7	4		1	5	1	1	1	1			7
August		61	38	1							3		3				9	4			3	1		3	1			10
September		67	36	1									3				8	2	1	1	2	3		1				14
Totals		189	106																									
Warren—	9,123																												
July		17	9						1		1	1	2				1	1						1				1
August		12	9	1								1	1				2	2				1						1
September		19	5								1	1						1						1				1
Totals		48	23																									
Washington—	13,378																												
July		21	6								1						1	1			1							2
August		30	9						1									2			2							4
September		47	9	2		1					1						1		2			2						
Totals		98	24																									
Wayne—	15,181																												
July		33	12			1					1		1								3			2		1		3
August		36	5														1	1			1							2
September		48	13	3							1						1	1		1	1							5
Totals		117	30																									
Webster—	17,377																												
July		44	12	1							2								1		1		1					6
August		47	16	5							3		1				2	1				1						3
September		43	8	1																	1							6
Totals		134	36																									

BIRTHS AND DEATHS REPORTED IN MISSOURI (STILLBIRTHS NOT INCLUDED) DURING THE QUARTER ENDING SEPTEMBER 30, 1913—Continued.

Counties.	Population, 1910	Total births during the quarter	Total deaths during the quarter	Important causes of death.																								
				Typhoid Fever	Smallpox	Measles	Scarlet Fever	Whooping Cough	Diphtheria and Croup	Influenza	Tuberculosis of the lungs	Other forms of Tuberculosis	Cancer	Diabetes	Epidemic Cerebrospinal Meningitis	Acute Anterior Poliomyelitis	Other diseases of the nervous system	Diseases of heart and circulatory system	Pneumonia, Bronchopneumonia	Other diseases of respiratory system	Diarrhoea and Enteritis (under 2 yrs. of age)	Acute Nephritis and Brights Disease	The puerperal state	Accidents	Suicides	Homicides	Other causes
Worth—	8,007																											
July		11	7										1	1				1		1							2
August		33	7										1				2		2									2
September		12	7														1				1	1						4
Totals		56	21																									
Wright—	18,315																											
July		42	20					1	1			1					2	2			2	1	1	1			8
August		38	16								2		1				2	2			3	1					5
September		40	11	1							3						1		1					1			4
Totals		120	47																									
St. Louis City—	687,029																											
July		1,335	936	16			2	5	4		68	12	52	7	3	5	26	130	39	26	94	83	14	73	16	12	249
August		1,313	892	19				9	8	1	77	9	46	11	1	2	35	126	22	29	109	74	12	58	21	7	216
September		1,365	891	19				9	8	1	78	7	46	10	3	1	34	124	36	14	108	74	10	60	20	7	222
Totals		4,013	2,719																									
Totals for State—																												
July		5,989	3,391	76		21	10	41	14	6	298	53	163	36	10	13	165	359	75	66	380	222	42	216	42	33	1050
August		6,720	3,586	148	1	9	3	45	18	4	294	47	193	38	3	5	181	411	57	58	358	209	37	246	45	25	1151
September		6,764	3,206	128	1	3	1	22	39	3	298	39	178	37	5	5	205	338	85	36	262	217	37	181	58	26	1002
Grand totals		19,473	10,183	352	2	33	14	108	71	13	890	139	534	111	18	23	551	1108	217	160	1000	648	116	643	145	84	3203